Video cassette recorder VR6491/75

Service
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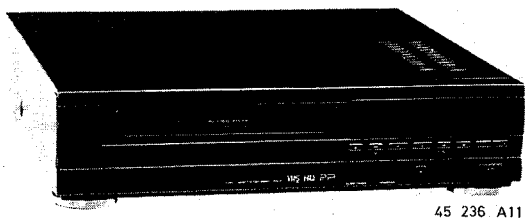

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Service Manual

VHS

PAL

VR6491/75 is a video cassette recorder with a TV–reception part and electronic timer, suitable for recording and playing back TV–signals which meet the CCIR–PAL–BH standard.
The signals are recorded on tape according to the VHS–standard.
The recorder may be operated in the Standard Play (SP) or in the Long Play (LP) mode.
The video cassette recorder has been provided with the Picture in Picture (PIP) facility.

CONTENTS **CHAPTER**

Specifications, Replacements, Adjustments. 1
Block diagrams, Circuit diagrams, Drawings of CBA's. 2
Exploded views, Partslist. 3

For the adjustment of the tape deck, reference is made to the Service Manual of tape deck DM 4/0.

I.R.–Remote Control AV5666/00 Servicecodenumber : 4822 218 30536

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

Documentation Technique Service Dokumentation Documentazione di Servizio Huolte-Ohje Manual de Servicio Manual de Serviço

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agrées, seuls habilités à réparer votre appareil en panne".

Subject to modification

4822 726 14786

Printed in The Netherlands

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Published by Consumer Electronics

CS 27 429

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Service Information

1990-02-08

VIDEO CASSETTE RECORDER VR6491/75

VR.O.S.-90-01

The following components have been changed

From production number 1501:

C464 has been changed into 0.022 µF 25V 4822 122 40588
C465 has been changed into 0.022 µF 25V 4822 122 40588

To improve the P.B. picture quality on LP mode

C811 has been changed into 0.1 µF 50V 4822 121 42698.

Service
Service
Service

SPECIFICATIONS

SPECIFICATIONS

Format	: VHS PAL standard
Video recording system	: Two rotary head helical scan system
Video signal	: PAL colour and B/W signals 625 lines
Recording playing time	: 4 hours max with E240 tape (SP mode) 8 hours max with E240 tape (LP mode)
Tape width	: 12.7 mm
Tape speed	: SP 23.39 mm/sec. LP 11.70 mm/sec.
Antenna	: 75 ohm unbalanced
Receiving channel	: VHF Channel NZ1–AU5A AU6–NZ11 UHF Channel 21–69
RF converter output signal	: UHF Channel 31–40 (Adjustable) Preset to Channel 34
Power requirement	: AC 240V 50Hz
Power consumption	: Approx. 25W
Operating temperature	: 5°C to 40°C
Storage temperature	: –20°C to 55°C
Weight	: 5 kg
Dimensions	: 360 mm (W) x 330 mm (D) x 85mm (H)

VIDEO

Input	: 1.0 Vp–p, 75 ohm
Output	: 1.0 Vp–p, 75 ohm

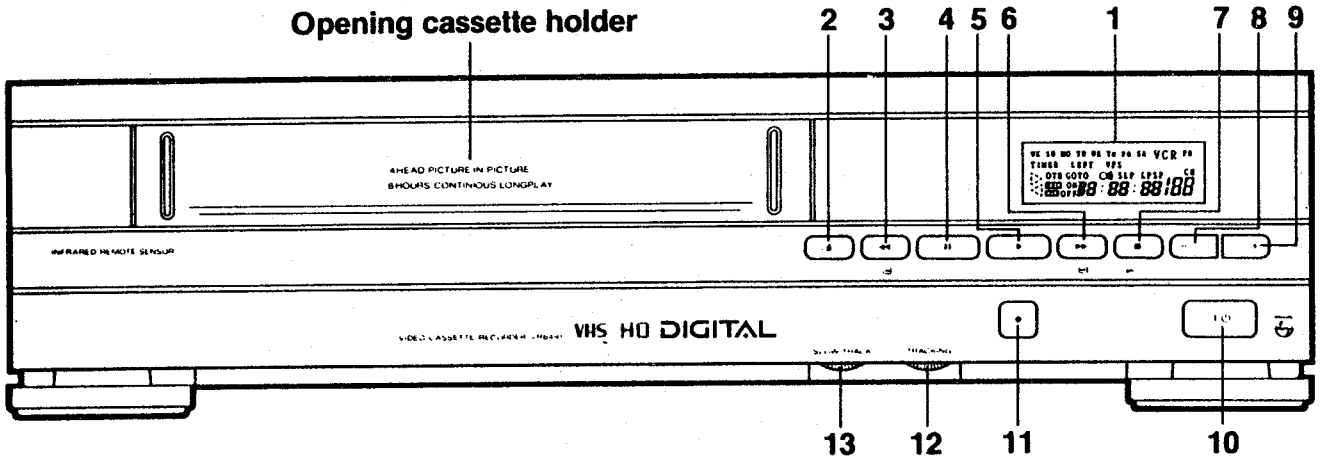
AUDIO 0dB = 0.775 Vrms

Input : Line	: –8dBs, more than 56k ohm
Output : Line	: –5dBs, less than 1k ohm

Accessories included	: Antenna 75 ohm coaxial connector cable (plug provided) Operation Manual Infrared remote control Battery

As part of our policy of continuous improvement, we reserve the right to alter design and specifications without notice.

Note :
The antenna must correspond to the new standard DIN 45325 (IEC 169–2) for combined UHF/VHF antenna with 75 ohm connector.


Opening cassette holder
4HEAD PICTURE IN PICTURE
8HOURS CONTINUOUS LONGPLAY
INFRARED REMOTE SENSOR
VHS HQ DIGITAL
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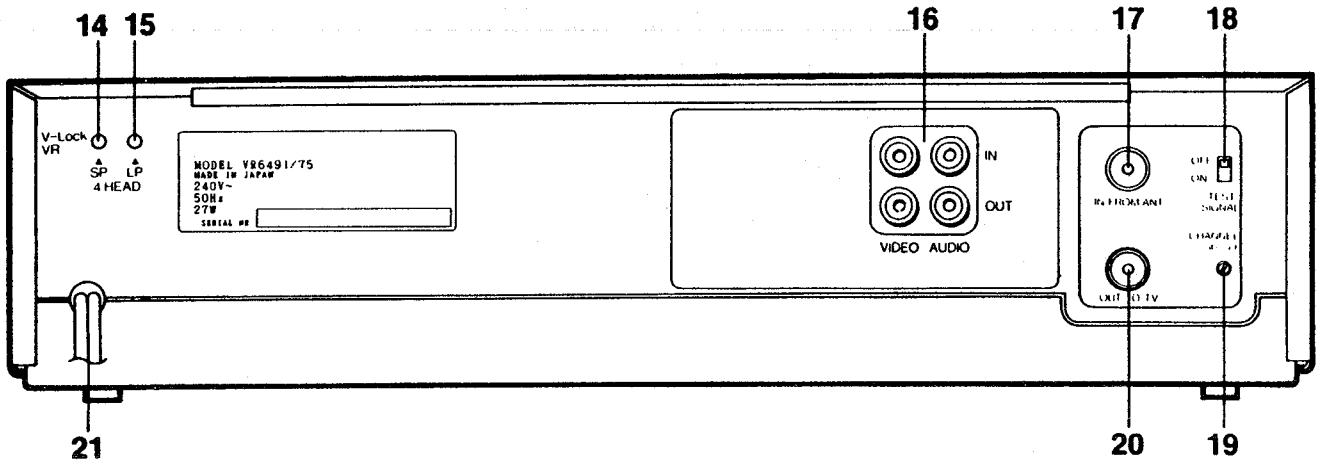
V-Lock VR
SP LP
4HEAD
MODEL VR6491/75
MADE IN JAPAN
240V~
50Hz
27W
IN
OUT
VIDEO AUDIO
ANTENNA
OUT TO TV
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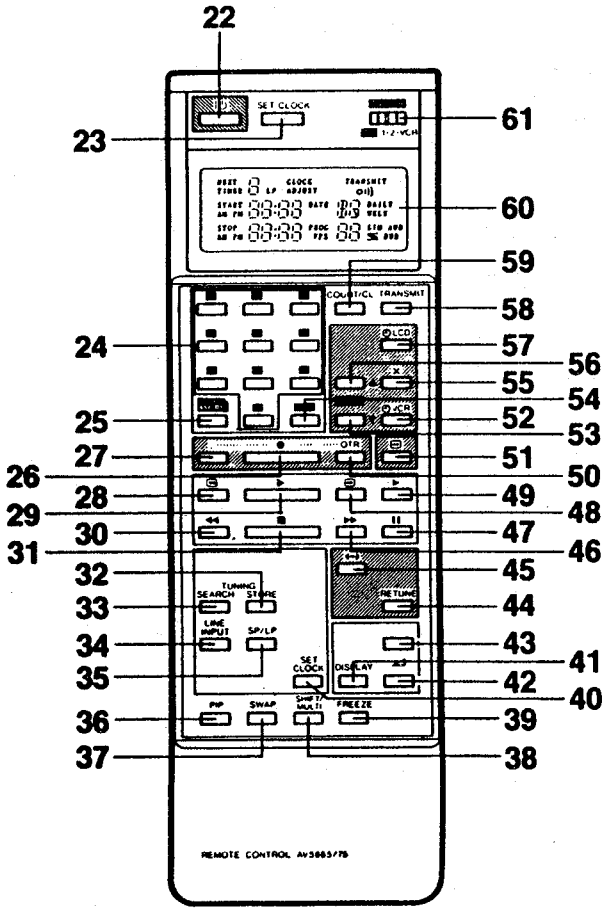
21


SET CLOCK
COUNT/CL TRANSMIT
RETURN
SEARCH
STORE
SET CLOCK
DISPLAY
SWAP
FREEZE
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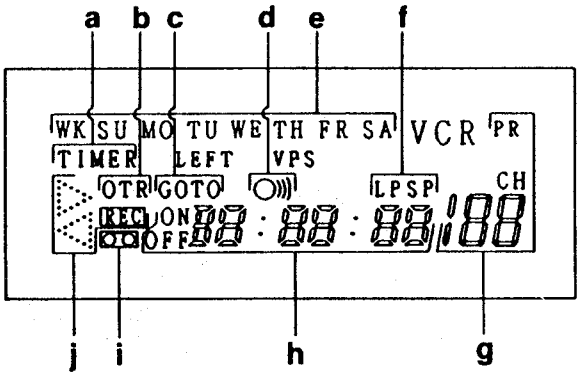
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VCR
PR
TIMER
LEFT
VPS
OTR
GOTO
LPSP
CH
REC
ON
OFF
a
b
c
d
e
f
g
h
i
j

Front

1 Display
2 ⏏ Eject button
3 ◀◀/⏮ Rewind/Picture search reverse button
4 ⏸ Pause/Still Frame button
5 ▶ Play button
6 ▶▶/⏭ Wind/Picture search forward button
7 ■ Stop button
8 – Down button
9 + Up button
10 I/⏻ On/Standby button
11 ● Record button
12 Tracking control
13 Slow tracking control

Rear

14 Vertical lock adjustment control (SP)
15 Vertical lock adjustment control (LP)
16 CINCH connectors (AUDIO, VIDEO)
17 Antenna in socket
18 Test SIGNAL switch
19 VCR output channel adjuster
20 RF out socket
21 Mains lead (power cord)

Remote Control

22 I/⏻ On/Standby button
23 Clock set button for LCD
24 0-9 0-9 Digit buttons
25 -/-- Single/Double entry button
AM/PM AM/PM Select button
26 ● Record button
27 Active button
28 ⏮ Picture search reverse button
29 ▶ Play/X2 button
30 ◀◀ Rewind button
31 ■ Stop button
32 Tuning Store button
33 Tuning Search button
34 LINE input selector
35 SP/LP Tape speed selector
36 Picture-in-Picture button (PIP)
37 Swap button
38 Shift/Multi button
39 Freeze button
40 Clock set button for VCR
41 Display button for TV
42 – Down volume TV sound (IF TV/VCR1/VCR2 is in position TV)
43 + Up volume TV sound (IF TV/VCR1/VCR2 is in position TV)
44 Retuning button
45 GoTo button
46 ▶▶ Wind button
47 ⏸ Still picture/Frame advance/ Pause button
48 ⏭ Picture search foward button
49 Slow motion button
50 OTR button (one touch recording)
51 Fast motion button
52 VCR Timer VCR button
53 ▽ Down button
54 Channel/Programme (C/P) selector
55 X Reset button
56 △ Up button
57 LCD Timer LCD button
58 Transmit button
59 Clock/Counter mode button
60 LCD display
61 TV/VCR1/VCR2 selector switch

Display

a Timer indicator 'TIMER'
b OTR indicator
c Go To indicator
d Remote control indicator
e Day indicators
f Speed indicator 'SP' 'LP'
g Channel/Programme input signal selector indicators
h Digital clock/Start time/ Stop time/Counter indicator
i Cassette-in indicator
j Function indicator

Remember. Only use cassettes of a well-known brand which carry the VHS logo.

3. SERVICE INSTRUCTIONS

3.1 SERVICE TEST PROGRAM

This VCR has been provided with a service test program. The following lines describe what can be checked with the program and how it is activated.

A. Continuous test

a. This test may be used to check if the VCR with loaded cassette is working correctly.

Start procedure:
Keep STOP and UP buttons pressed in simultaneously when connecting the VCR to the mains voltage.
Two different tests are available:
a) continuous PLAY.
The VCR is brought into the continuous play/rewind mode when, prior to the start procedure, a recorded cassette is loaded into the VCR. The recorder will play the tape till its end, rewind till the beginning of the tape, go back to play and so on.
b) continuous RECORD/PLAY
When the cassette is loaded into the VCR before the start procedure is executed and after the start procedure RECORD is pressed, the VCR will enter the record mode till the end of the tape and then go into the continuous play/rewind mode.
Note: the continuous tests are interrupted by disconnecting the VCR from the mains supply.

B. Display test

This test may be used to confirm that all elements and symbols of the multifunction display are working correctly.
Start procedure:
Keep the STILL and FF buttons pressed in simultaneously when connecting the VCR to the mains supply. All indication leds must be ignited.

C. Initialisation of the microprocessor

This function is used to initialize (to reset) the microprocessor, all the data that is stored in the RAM memory is lost.
Start procedure:
Keep STILL and FF buttons pressed in simultaneously when connecting the VCR to the mains supply.All leds must be ignited,press reset via the remote control.All data is removed from the RAM.

D. Microprocessor program indication

Start procedure:
Keep STOP and DOWN buttons pressed in simultaneously when connecting the VCR to the mains supply. The "hours" indication (2 digits) of the multifuction display will show the stroke number of the VCR e.g. 75 for Australia.
The minutes display will show the features mono or stereo sound.
(5 # Stereo, black # Mono)

3.2 Service position

Place the unit as shown in Fig. 1 for servicing. Refer to Disassembly procedure item 4.6
Note: To operate the unit with the upper CBA's open, use the extended cable code number 4822 321 60545 to connect the Display Control CBA with the main CBA. If the Display Control CBA is removed, then the 4 pin plug will be disconnected and will disable the Units Display.

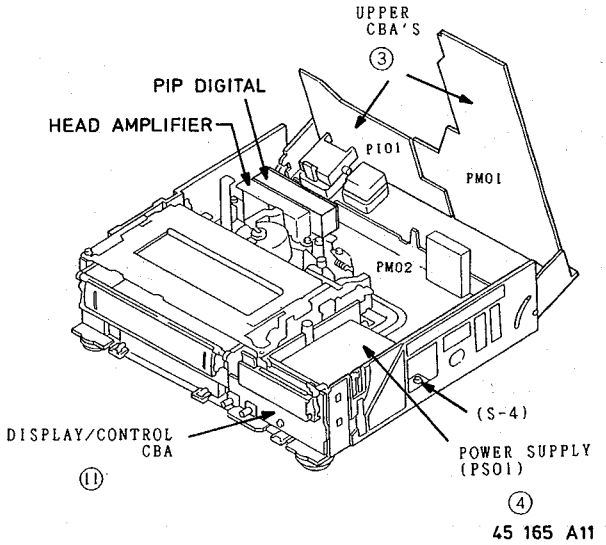

Fig. 1

3.3 Manual unloading of the VCR

When, due to some electrical or mechanical failure of the VCR a cassette is stuck in the recorder, it is possible to remove the cassette by hand.
- Remove the bottom plate.
- Rotate the center pulley (Fig. 2) counterclockwise while pushing the change lever on the bottom side of the tapedeck (Fig. 3) as indicated by the arrow to release the lock. See also the relevant chapter in tapedeck manual DM 4/0.
Warning: Removal of the loader from the tapedeck requires vast readjustments of the deck after remounting of the loader.

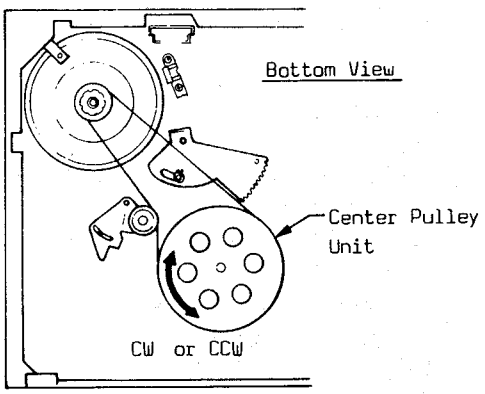

Fig. 2

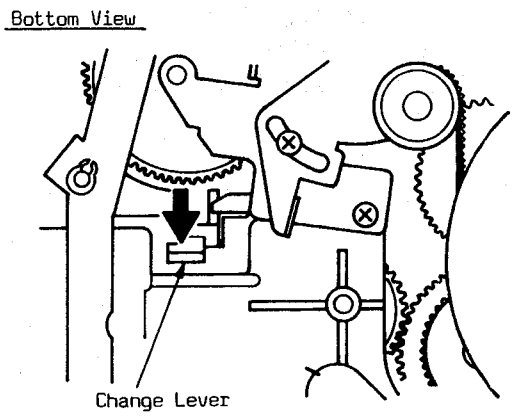

Fig. 3

3.4 Capstan rotor unit

The Capstan rotor unit is supplied as a replacement part in a complete unit with a spring loaded capstan pulley. Do not remove the retaining ring on the capstan pulley of the capstan rotor unit or the replacement unit will be rendered useless (Fig. 4).
For more information see tapedeck manual DM 4/0.

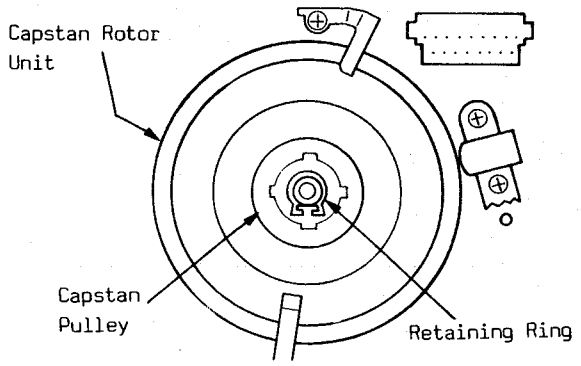

Fig. 4

3.5 Variable voltage transformer

Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when trouble shooting in this type power supply circuit, a variable transformer is required.

3.6 Prevention of electrostatic discharge (ESD)

All IC's and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce their life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

3.7 Measurements

All voltages, given on the circuit diagrams, have been measured in the SP recording mode.

3.8 Parts replacement on Head amplifier ass'y

- Unsnap and remove the shield case.
- Remove the Head Amp CBA by unsoldering the 5 fixing points (A) that connect the shield case with the Head Amp CBA (Fig. 5).
- Open the side of the shield case slightly and pull out the Head Amp CBA.
- After parts replacement it is necessary to resolder the shield case at points (A) on the Head Amp CBA.
- Re-install the shield case.

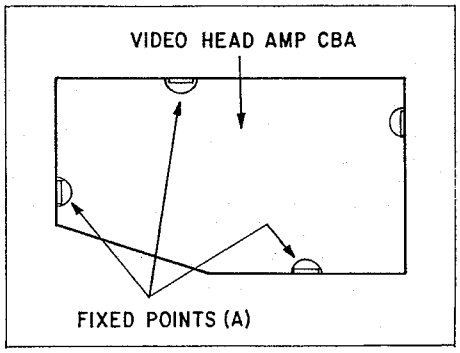

Fig. 5

3.9 Parts replacement on PIP-Module

- Unsolder the shield case 2 points from the lower CBA.
- Remove the plugable module with help of a screwdriver (Fig. 6).
- Unsolder the 3 fixing points of the shield case of the PIP-Module (Fig. 7).
- After replacement of parts it is necessary to resolder the shield case in reverse order.

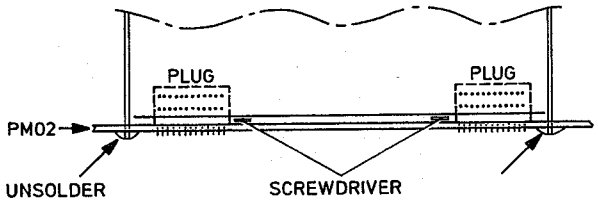

Fig. 6

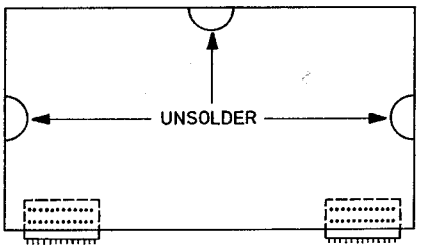

Fig. 7 45 170 A11

3.10 Connecting/disconnecting of plugs

a. Disconnecting the flexible cable to the trap connector P1504 and P1508 on the tapedeck (Fig. 8).
- Pull-out both ends of the locking tab which surrounds the connector to release the connector.
- Remove the flexible cable carefully (See Fig. 8).
- Connecting the flexible cable is done in the reverse order
  Note: Take care not to damage the cable.

b. Flat cable connectors
Connecting/disconnecting is done by carefully pushing in or pulling out the flexible cable.

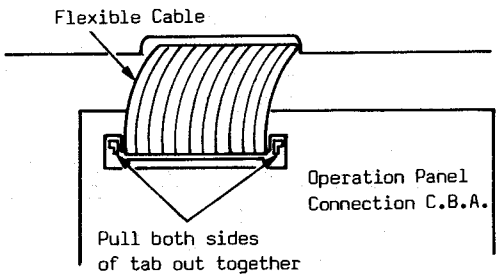

Fig. 8

3.11 Identification of connectors on schematic diagrams

- Each connector is labelled with a specific schematic and connector number,which indicates to what it is connected to and on which diagram it is located (Fig. 9).
- Each connector shown as a number inside of a square is a connection within a circuit and within the same CBA.
- Use the wiring diagram to find the connections between associated connectors.

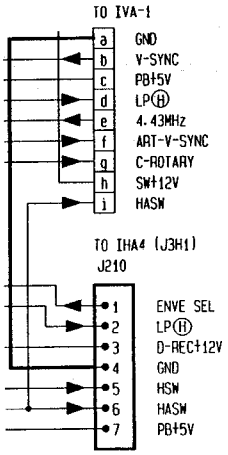

Fig. 9

4. DISASSEMBLY OF CABINET PARTS AND SERVICE POSITION OF CBA'S

4.1 Disassembly flow chart

- The following flow chart indicates the correct order to be used when disassembling the VCR (Fig. 10).
- The chart starts with the removal of the cabinet parts, and the order used to gain access to the CBA's.
- When reassembling perform the steps in the reverse order.

Note: When removing the front cover and its associated CBA's,use extreme care when unlocking the plastic tabs as they may break easily.

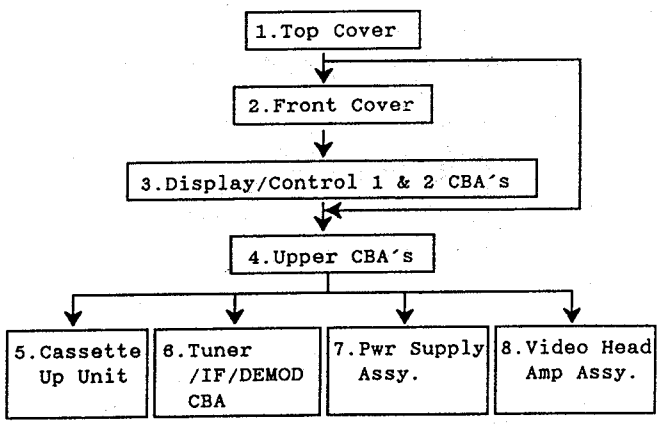

Fig. 10

4.2 Removal of the top cover

- Undo the 2 screws (Fig. 11).
- Spread the top cover at the points where the 2 screws were removed, enough to clear the side indentations.
- Lift the top cover up while pulling it back to remove it.

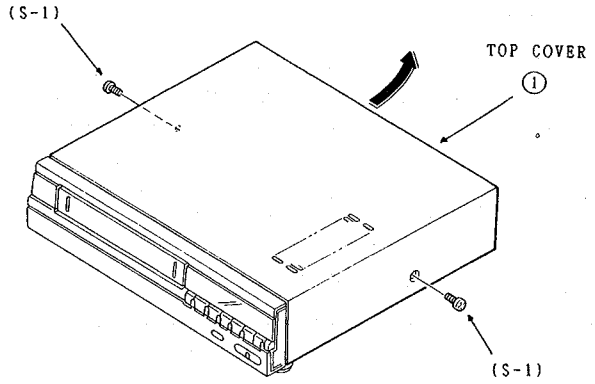

Fig. 11

4.3 Removal of the bottom plate

- Unscrew the 5 screws (Fig. 12).
- Remove the bottom plate.

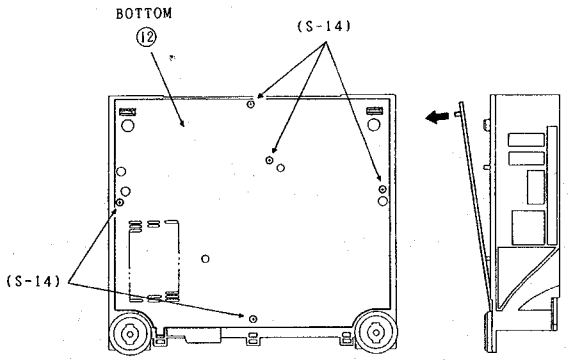

Fig. 12

4.4 Removal of the front cover

- Remove the screw on the top of the front panel (Fig. 13).
- Unlock the locking tabs on the right hand and left hand side of the front cover (Fig. 13).
- Remove the front cover.

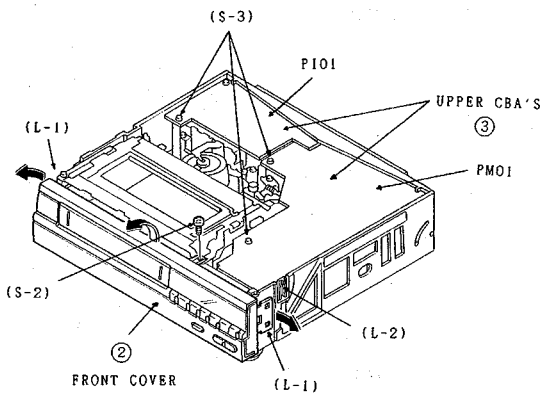

Fig. 13

4.5 Service position of the upper CBA's

- Unscrew the 3 red screws (Fig. 14).
- Unlock the locking tab.
- Lift up the upper CBA's slightly and remove the plug.
- Put the upper CBA's in the upright position.

Note: Use the extended cable 4822 321 60545 when the VCR must be operated with the upper CBA's in the service position.

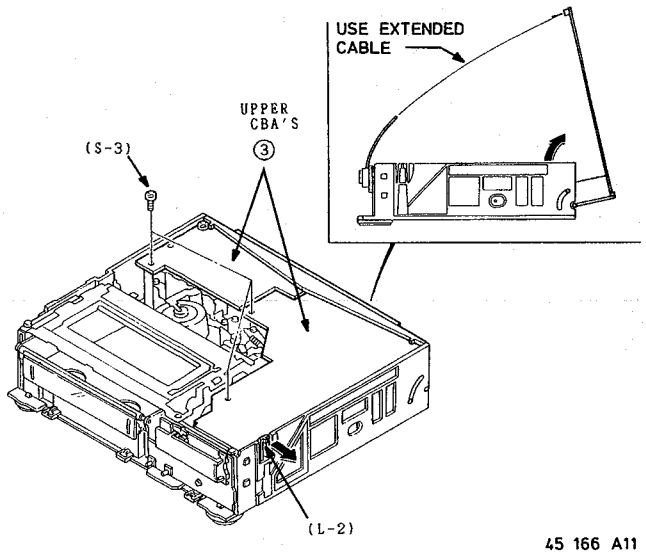

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Fig. 14

4.6 Removal of the power supply unit.

- Remove the fixing screw (Fig. 15).
- Take out the power supply unit in an upward direction.

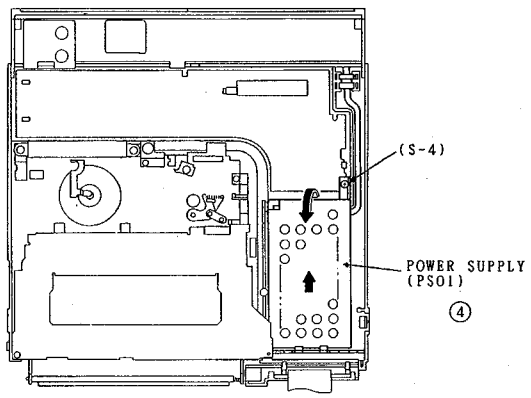

Fig. 15

4.7 Removal of the lower CBA and wiring connections

Note: The lower CBA may be turned 90 degrees.The CBA is then accessible from both sides (Fig. 16).

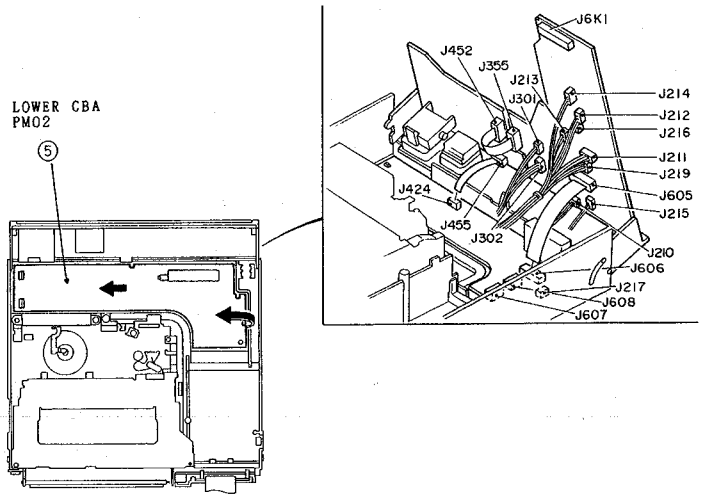

Fig. 16

4.8 Removal of the rear holder

Note: Put the VCR on a 5–10 cm high box when measuring in the PIP module. The rear holder with the CBA's will move in a downward direction (Fig. 17).

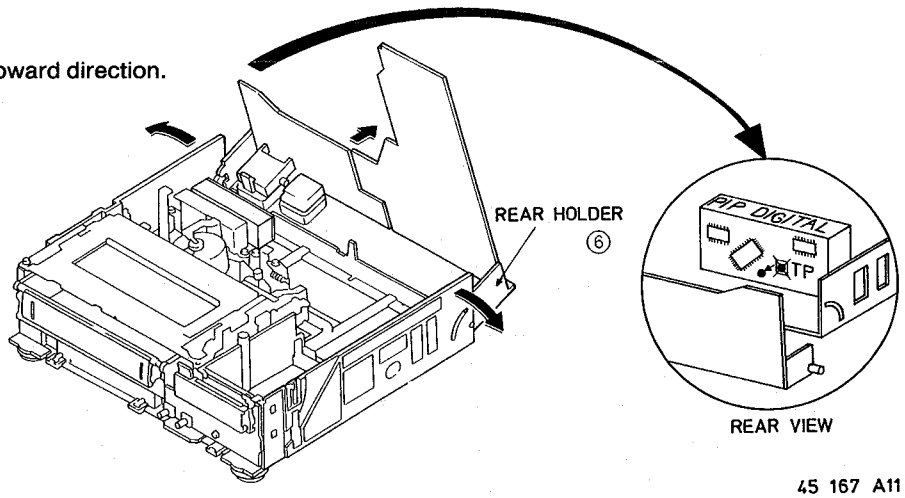

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Fig. 17

4.9 Removal of the upper CBA's from the rear holder

- Undo the screws S–15 and S–16 (Fig. 18).
- Pull the CBA's out of the holder.

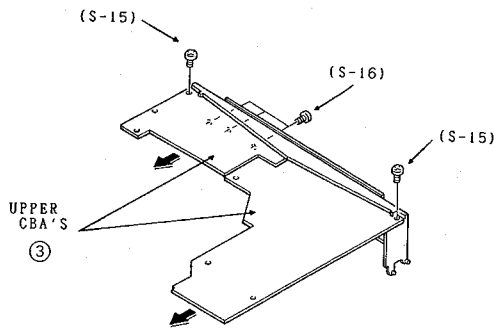


Fig. 18

4.10 Removal of the Video head amplifier

- Undo the 2 red screws (Fig 19).
- Take out the head amplifier unit.

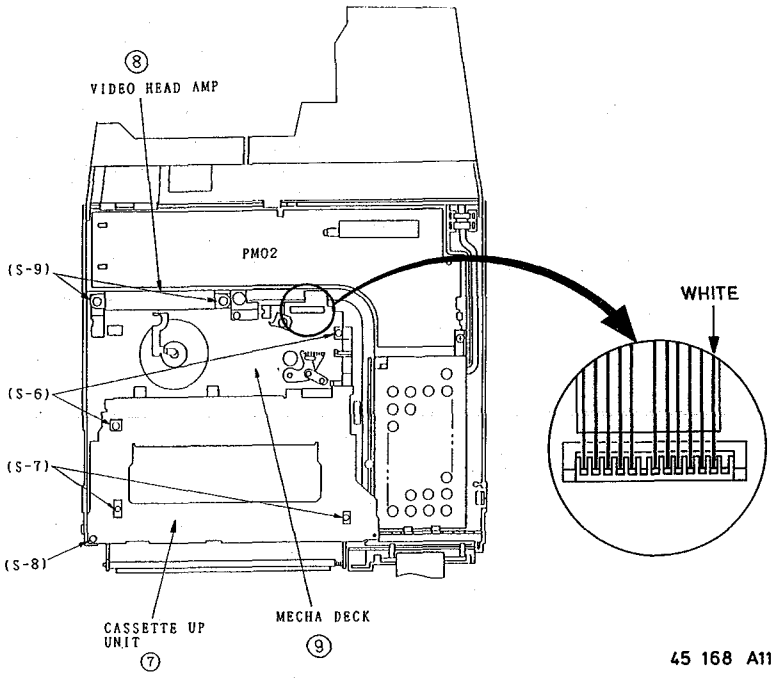


Fig. 19

4.11 Removal of the tape deck

- Remove the screws S–8, S–10 and S–11 (Fig. 20).
- Disconnect the various plugs.
- Lift the tape deck out of the frame.

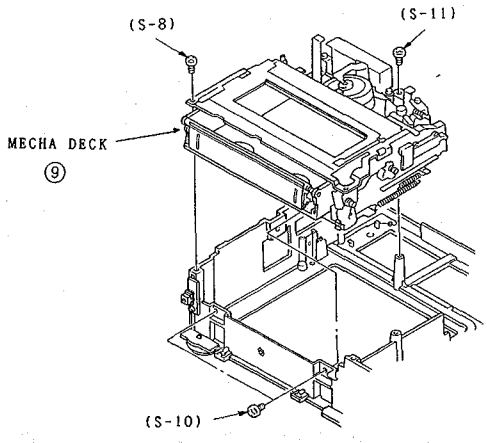


Fig. 20

4.12 Removal of the Display/Control/IR sensor CBA's

- Remove the screws (Fig. 21).
- Unlock the 2 locking tabs.

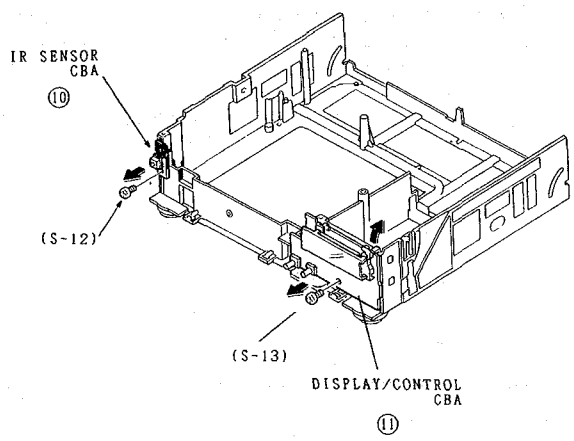


Fig. 21

5. ELECTRICAL ADJUSTMENT PROCEDURES

5.1 Test equipment

- DVM (Digital voltmeter). Measuring range: 0.01–50 V.
- Dual trace oscilloscope. Sensitivity: 0.001–50 V/Div.
- Frequency counter: Frequency range 0–50 MHz.
- Signal generator. Sine wave: 0–10 MHz.
- PAL Video pattern generator.
- Colour TV Receiver or Monitor.
- Plastic Tip driver and non metallic screwdriver.
- VHS Alignment tape (4822 397 30103).
- Extended cable (4822 321 60545).

Attention:
Because a life chassis ground is present in the power supply part, an isolation transformer must be used. Also, in order to have the possibility to alter the input voltage slowly when troubleshooting in the power supply section, an adjustable isolation transformer is required.

5.2 Servo section

Note: When making adjustments in the servo section of the VCR, always take care that the tape deck has been correctly aligned and that the tracking control is in its centre position.

5.2.1 Head switch point

- Connect the A channel of the oscilloscope to **TPVO** in the Audio/Video selector section of PI01, sensitivity 1 V/Div.
- Connect the B channel of the oscilloscope to **TP221** on the servo section of **PM01**, sensitivity 5 V/Div.
- Set the time base of the oscilloscope to 1 msec./Div., magnification x 10.
- Trigger the time base with the signal on **TP221**.(+ slope).
- Play–back (SP) the colour part of the alignment tape.
- Adjust R225 in the servo section PI01 such that **6.5 +–+/– 1** lines prior to the frame sync. pulse are visible (Fig. 22).

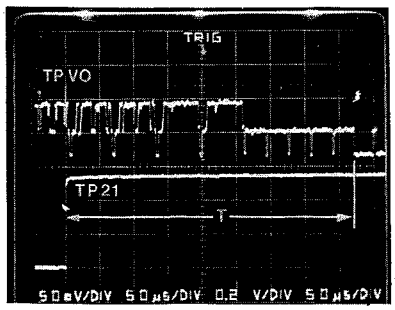


Fig. 22

5.2.2 Tracking fix

- Connect the A channel of the oscilloscope with **TP221** in the servo section of PM01, sensitivity 5 V/Div.
- Connect the B channel of the oscilloscope with **TP222** in the servo section of PM01, sensitivity 5 V/Div.
- Set the time base to 2 msec./Div.
- Trigger the time base with the signal on **TP221** (+ slope).
- Play–back (SP) the colour part of the alignment tape.
- Adjust **R 280** in the servo section of PM01 such that the leading edge of the signal on TP222 **1.6 +/– 0.4 msec.** later is than the trailing edge of the signal on TP221 (Fig. 23).
- Let the VCR stabilize and confirm that the adjustment has been made correctly.

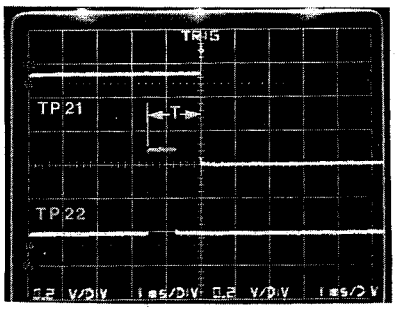


Fig. 23

5.2.3 Slow free run

- Put the **Still/slowtracking control** in the centre position.
- Connect the VCR to a signal source an make a recording.
- Connect a jumper wire between **TP24** in servo section of PM01 and ground.
- Connect a jumper wire between **TP25** in servo section of PM01 and ground.
- Connect a frequency counter to **TP23** in servo section in PM01.
- Set the VCR to the play–back mode and next to the still mode.
- Adjust **R272** on the servo section of PM01 until the frequency counter reads **453+/– 15 Hz.**

Remove the 2 jumper wires.

5.2.4 Artificial V–sync.

- Play–back a self recorded tape in **SP** mode.
- Place the VCR in the slow mode using the remote control.
- Adjust the slow tracking control to minimize the noise in the picture.
- Place the VCR in the still mode.
- Adjust **R2B0** in the logic section of PM01 until no vertical jitter is observed at the centre of the monitor display.
- Repeat these steps when the VCR is in the **(LP)** mode.
- Adjust **R2A9** in the logic section of PM01 until no vertical jitter is observed at the centre of the monitor screen.

5.2.5 Slow tracking

- Set the slow tracking control on the front panel to its centre position.
- Play–back a self recorded tape in **SP** mode.
- Place the VCR in the slow mode using the remote control.
- Adjust **R257** in servo section of PM01 until no noise is observed in slow picture mode.
- Rotate the slow tracking control on the front panel in both directions and ensure that the noise appears evenly from the top and the bottom of the picture.
- Repeat these steps when the VCR is in the LP mode.
- Adjust **R253** until no noise is observed on the screen of the monitor in the **LP** slow picture mode.

5.3 Linear audio section

5.3.1 Bias current

- Adjust the VCR to AV input.
- Supply a colour bar signal to the video input terminal.
- Short circuit the audio input terminal.
  –Load a cassette tape into the VCR.
- Connect an oscilloscope or a milli voltmeter to **TP402** in the Audio section of PM02
- Connect the shield of the measuring cable to **TP401** in the Audio section of PM02.

Note: Maximum length of measuring cable 1 meter.

- Put the VCR in the SP record mode.
- Adjust the signal level on **TP402** with **R 431** in the audio section of PM02 to **2.4 +/– 0.05 mV RMS** on the millivoltmeter or to **6.8 +/– 0.1 mVp.p** on the oscilloscope.

5.4 Video section

5.4.1 E–E Level

- Feed a PAL colour bar with white window signal to the VCR.
- Connect the A channel of the oscilloscope to **TPVO** in the Audio/video section of the **PI01** CBA.
- Set the sensitivity of the oscilloscope to 0.2 V/Div. and the timebase to 10 usec./Div.
- Adjust the signal on **TPVO** to **1.0 +/– 0.05 Vp.p** (when terminated with 75 ohm or to **2.0 +/– 0.1 Vp.p** when unterminated) with **R328** in the luminance section of the **PM01** CBA (Fig. 24).

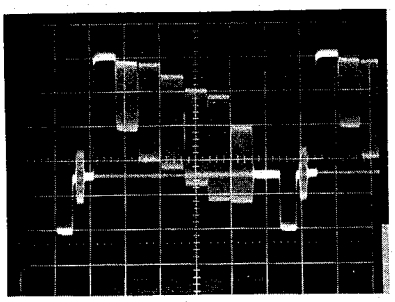


Fig. 24

5.4.2 Sync.tip frequency and deviation

5.4.2a Sync.tip frequency

- Put the VCR in the STOP mode.
- No input signal to the VCR.
- Connect a frequency counter to **TP301** in luminance section of PM01 CBA.
- Adjust the frequency of the signal on TP301 to **3.8 +/– 0.04 MHz** with **R333** in the luminance section of PM01 CBA.

5.4.2b Play–back video level

- Load the alignment tape into the VCR.
- Connect the A channel of the oscilloscope to **TPVO** in the Audio/video section of PI01 CBA.Connect the ground lead of the probe to the scope ground at the left rear corner (foil side) of PI01BD.
- Set the sensitivity of the scope to 0.1 V/Div., the time base to 10 usec./Div.
- Put the VCR in SP play–back mode.
- Adjust the amplitude of the signal on TPVO to **1.0 +/– 0.05 Vp.p.** (when terminated with 75 ohm or **2.0 +/– 0.1 Vp.p.** when unterminated) with R301 in the Luminance section of PI01 CBA (Fig. 25).

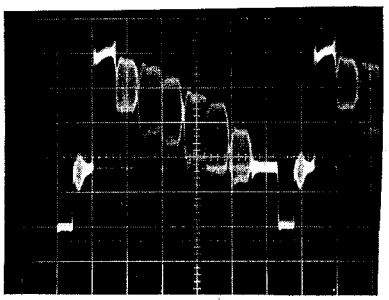


Fig. 25

5.4.2c Deviation

- Put the VCR in the **STOP** mode
- Feed a colour bar with white window signal to the VCR.
- Connect the A channel of the oscilloscope to **TP301** in the luminance section of PM01 CBA.
- Set the sensitivity of the scope to 0.2 V/Div., the time base to 5 usec./Div., the timebase magnifier to 10 x.
- Adjust **A=0.21 +/– 0.01 usec.** (Fig....) with **R332** in the luminance section of PM01 CBA.
- Adjust from the beginning of the sweep and measure the first line seen, which is the white window trace on the multiple wave form.
  Focus the scope on the first multiple waveform trace (Fig. 26).
- After completion of the adjustment self record a SP colour bar with white window.
- Play–back the portion just recorded and confirm the level at TPVO is 1.0 +/– 0.05 Vp.p. (terminated) or 2.0 +/– 0.1 Vp.p. unterminated.
- If the levels are not correct then confirm 5.5.2b (Play–back video level) and readjust the deviaton again.

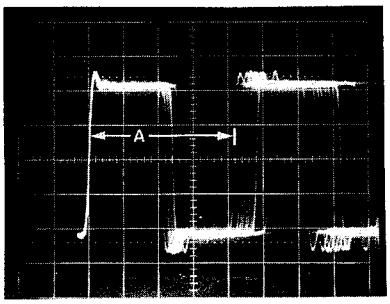


Fig. 26

5.5 Timer tuning section

5.5.1 Clock frequency

- Put the VCR in the stop mode.
- Set clock.
- Connect a frequency counter via a 1:10 probe to **TP6K** in Tuner timer section of PM01.
- Adjust the frequency of the signal on TP 6K to **32.769 KHz +/– 0.1Hz** with C6K5 in the Tuner timer section of PM01.

5.6 Picture in picture unit

5.6.1 4.43 MHz.

- Connect a frequency counter via a 1:10 probe to **TP801.**
- Adjust the frequency of the signal on TP801 to **4.433618MHz. +/– 50 Hz.** with **C 865.**

5.6.2 17.73 MHz

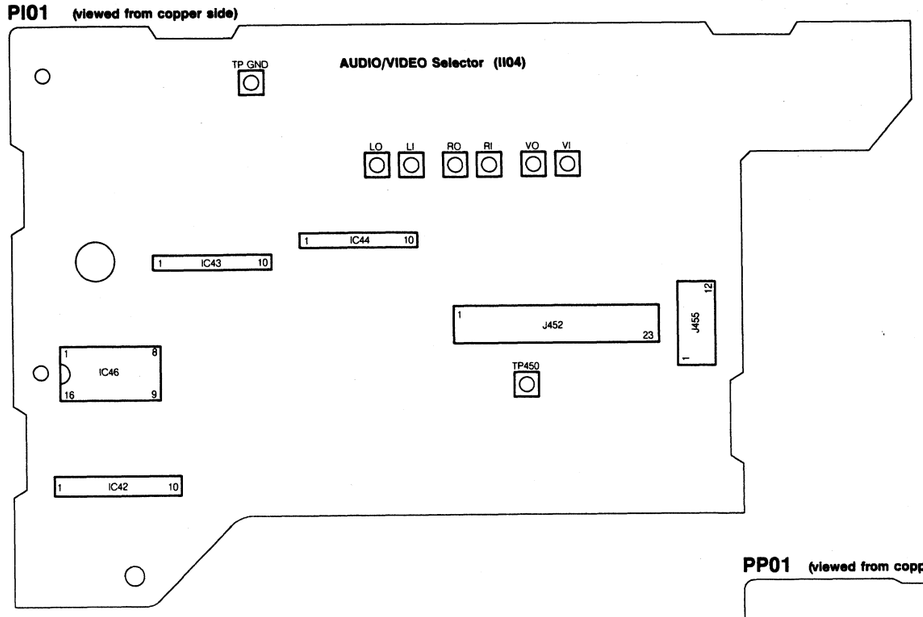
- Connect a frequency counter via a 1:10 probe to **TP802.**
- Adjust the frequency of the signal on TP802 to **17.73447 MHz. +/– 50 Hz.** with **C866.**

5.6.3 5 MHz.

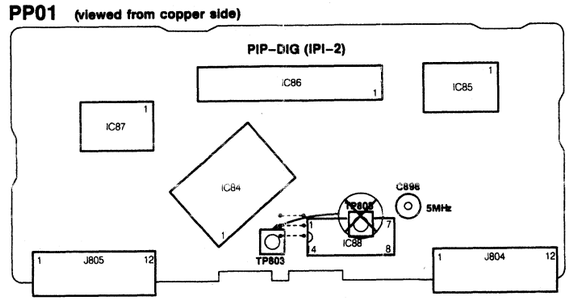
- Connect a frequency counter via a 1:10 probe to **TP803.**
- Adjust the frequency of the signal on TP803 to **4.895 MHz. +/– 5 KHz.** with **C898.**

TESTPOINT/ADJUSTMENT LOCATIONS

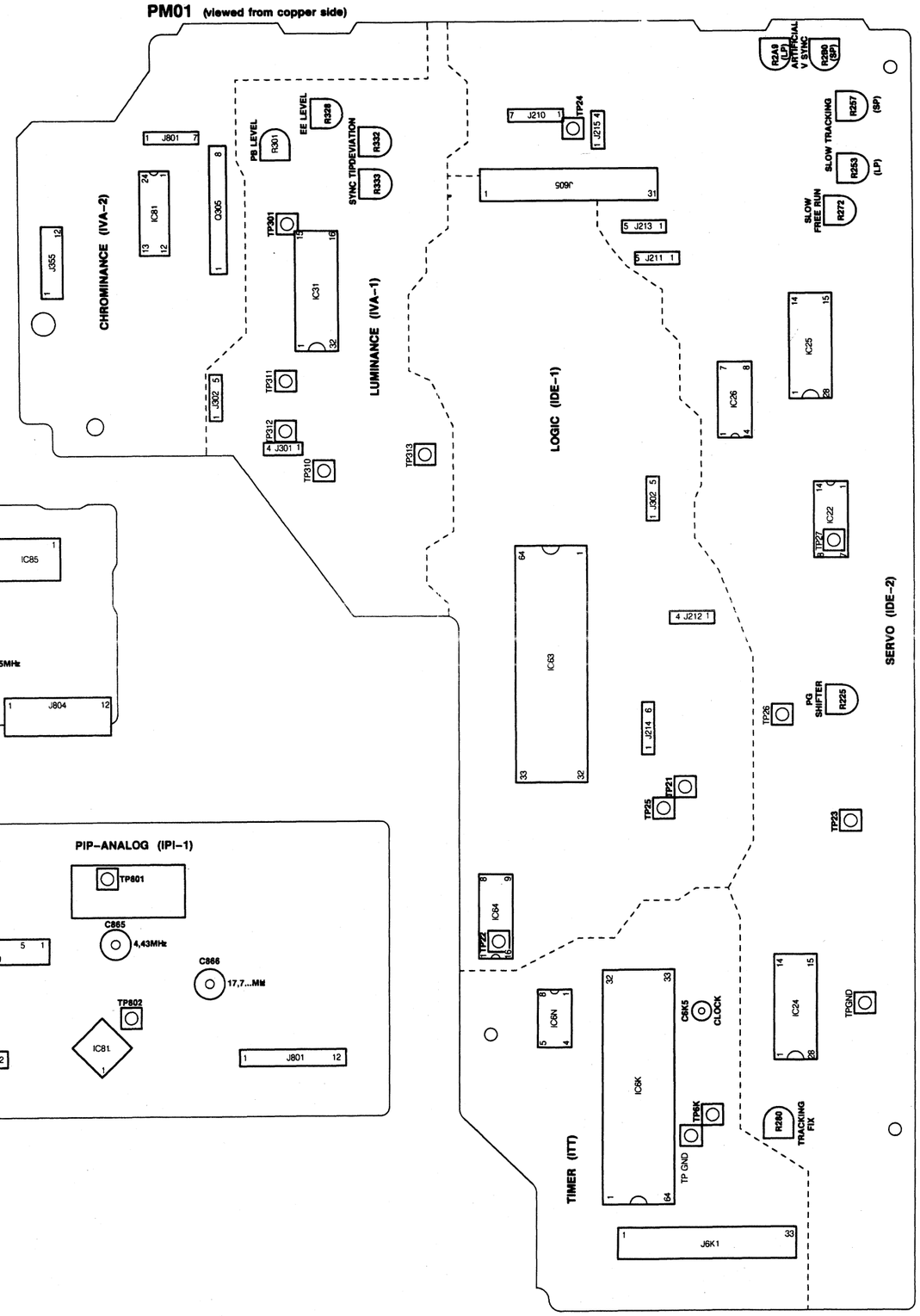
PI01 (viewed from copper side)



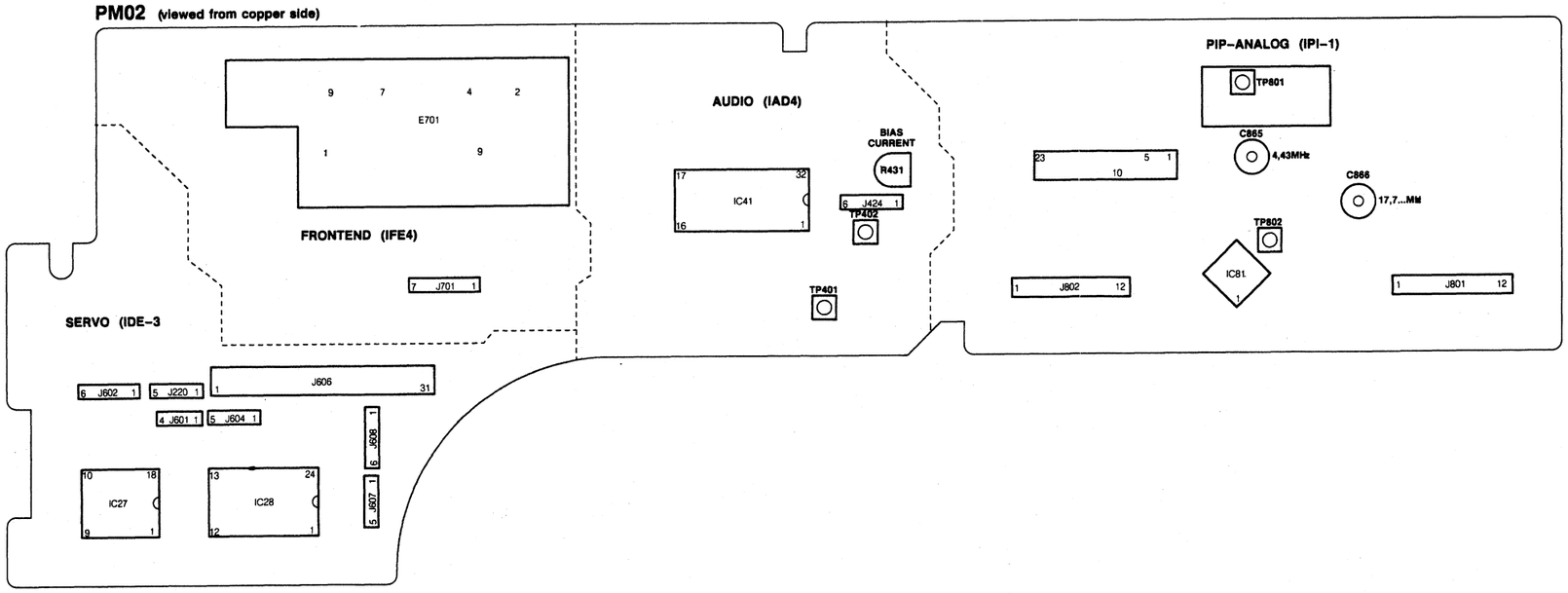
PP01 (viewed from copper side)



PM01 (viewed from copper side)



PM02 (viewed from copper side)



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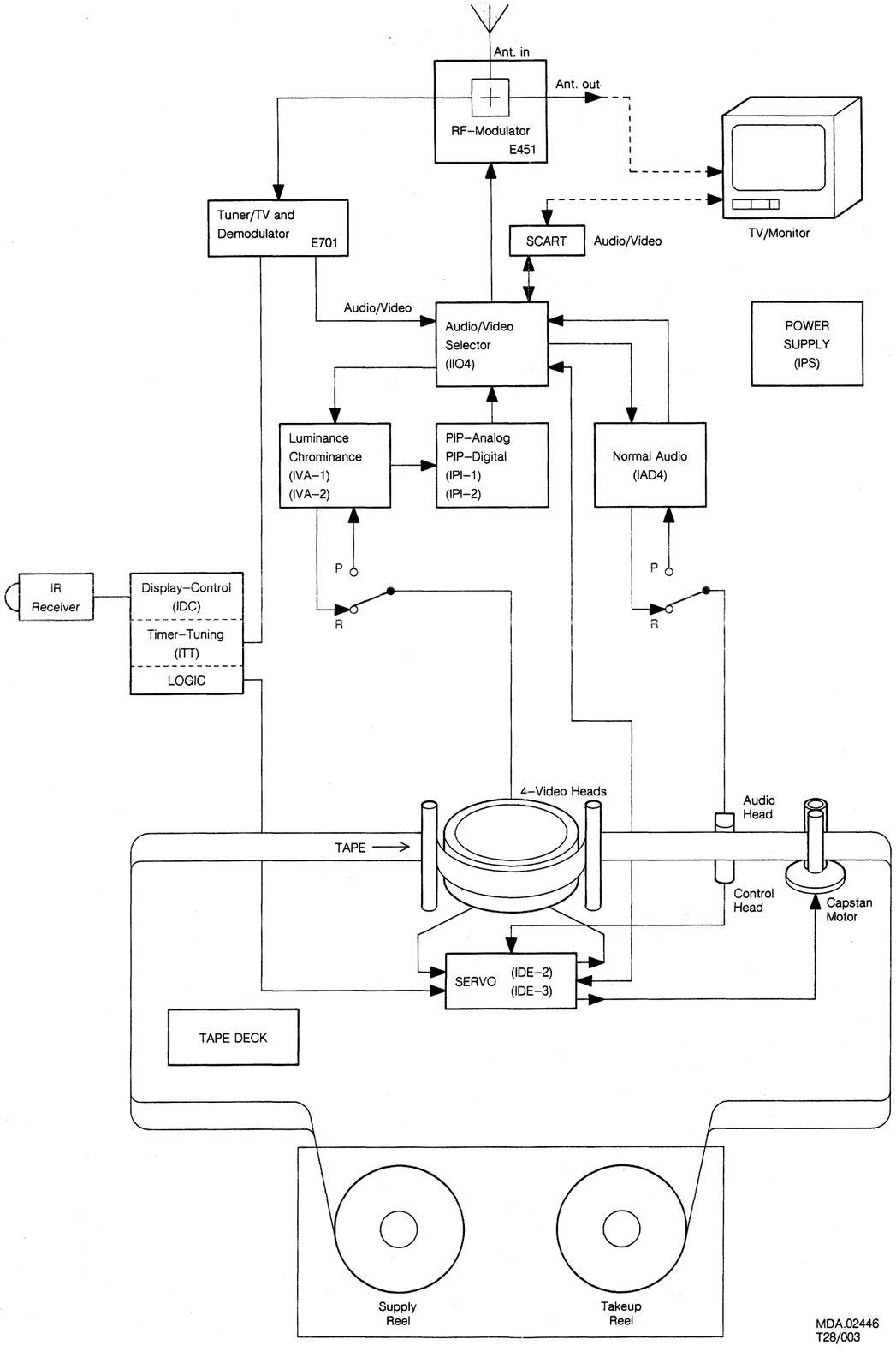
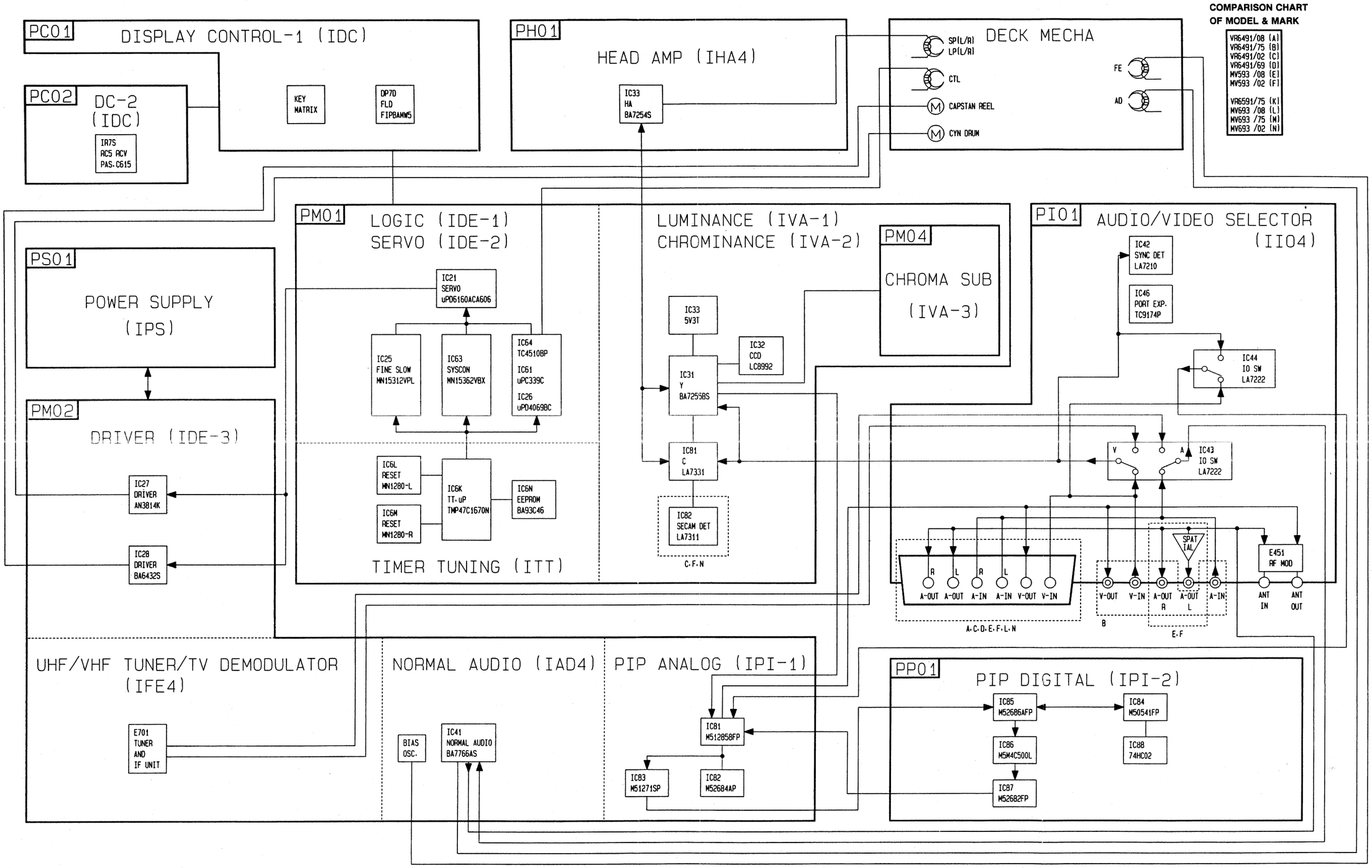
OVERALL BLOCK DIAGRAM 1



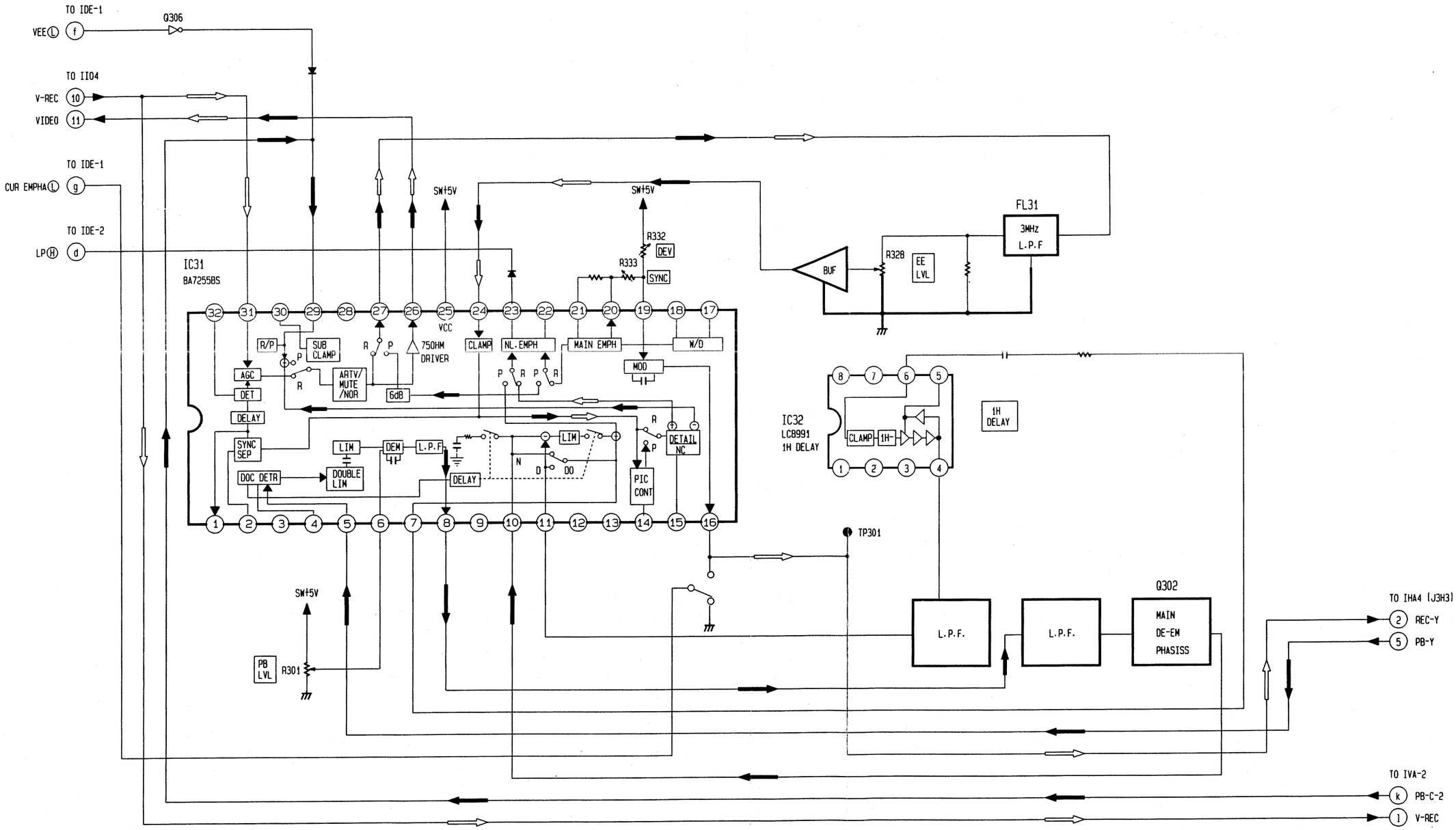

PC01
DISPLAY CONTROL-1 (IDC)
PC02
DC-2
(IDC)
IR7S
RC5 RCV
PAS-C615
KEY
MATRIX
DP7D
FLD
FIPBAMW5
PH01
HEAD AMP (IHA4)
IC33
HA
BA7254S
DECK MECHA
SP(L/R)
LP(L/R)
CTL
CAPSTAN REEL
CYN DRUM
FE
AD
COMPARISON CHART
OF MODEL & MARK
VR6491/08 (A)
VR6491/75 (B)
VR6491/02 (C)
VR6491/69 (D)
MV593 /08 (E)
MV593 /02 (F)
VR6591/75 (K)
MV693 /08 (L)
MV693 /75 (M)
MV693 /02 (N)
PS01
POWER SUPPLY
(IPS)
PM01
LOGIC (IDE-1)
SERVO (IDE-2)
IC21
SERVO
uPD6160ACA606
IC25
FINE SLOW
MN15312VPL
IC63
SYSCON
MN15362VBX
IC64
TC4510BP
IC61
uPC339C
IC26
uPD4069BC
IC6L
RESET
MN1280-L
IC6M
RESET
MN1280-R
IC6K
TT.uP
TMP47C1670N
IC6N
EEPROM
BA93C46
TIMER TUNING (ITT)
LUMINANCE (IVA-1)
CHROMINANCE (IVA-2)
PM04
CHROMA SUB
(IVA-3)
IC33
5V3T
IC32
CCD
LC8992
IC31
Y
BA7255BS
IC81
C
LA7331
IC82
SECAM DET
LA7311
C.F.N
PM02
DRIVER (IDE-3)
IC27
DRIVER
AN3814K
IC28
DRIVER
BA6432S
PI01
AUDIO/VIDEO SELECTOR
(II04)
IC42
SYNC DET
LA7210
IC46
PORT EXP.
TC9174P
IC44
IO SW
LA7222
IC43
IO SW
LA7222
V
A
R
L
R
L
A-OUT
A-OUT
A-IN
A-IN
V-OUT
V-IN
A.C.D.E.F.L.N
B
SPAT
IAL
V-OUT
V-IN
A-OUT
R
A-OUT
L
A-IN
E.F
E451
RF MOD
ANT
IN
ANT
OUT
UHF/VHF TUNER/TV DEMODULATOR
(IFE4)
E701
TUNER
AND
IF UNIT
NORMAL AUDIO (IAD4)
BIAS
OSC.
IC41
NORMAL AUDIO
BA7766AS
PIP ANALOG (IPI-1)
IC81
M512858FP
IC83
M51271SP
IC82
M52684AP
PP01
PIP DIGITAL (IPI-2)
IC85
M52686AFP
IC84
M50541FP
IC86
M5M4C500L
IC88
74HC02
IC87
M52682FP

2

UMINANCE BLOCK DIAGRAM

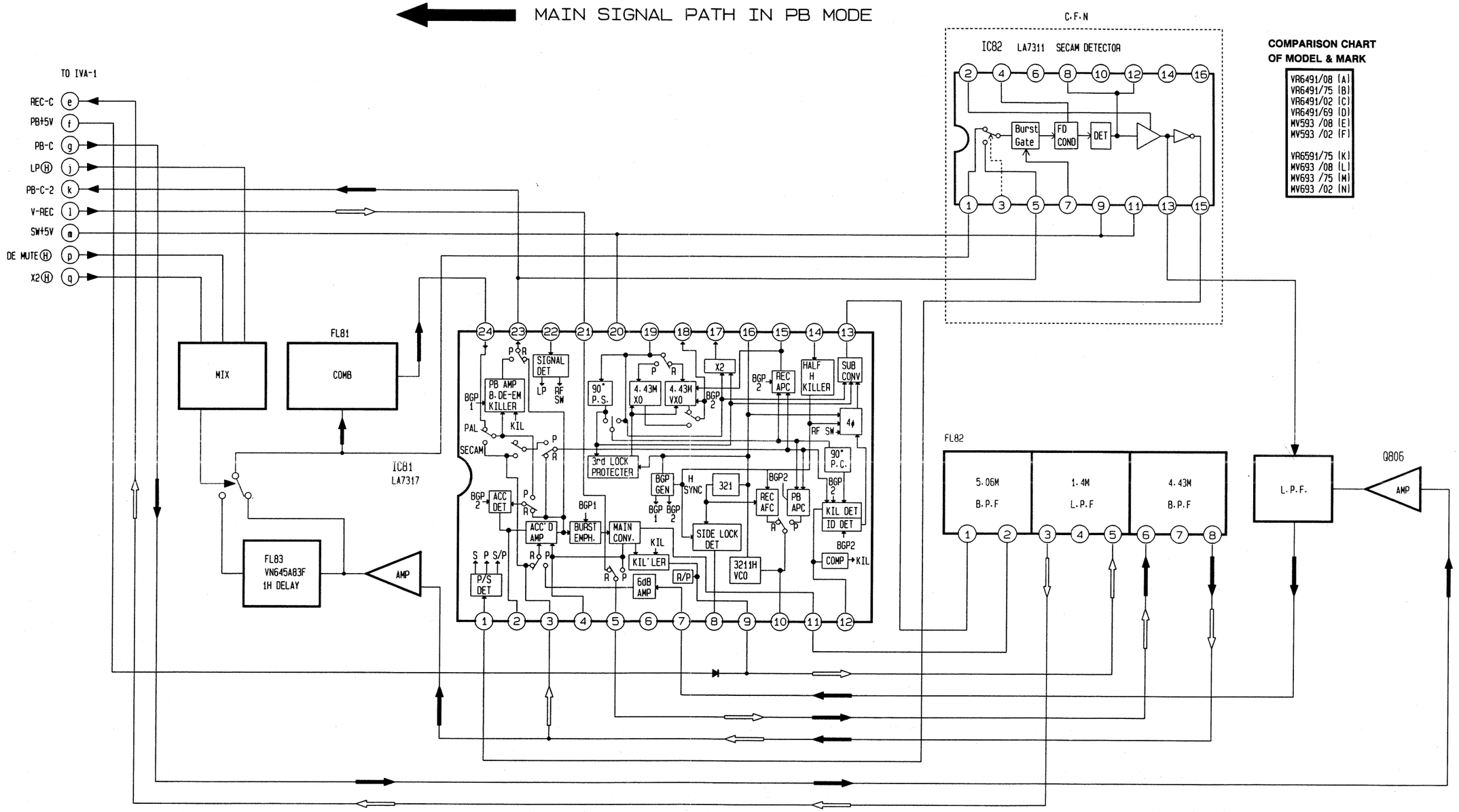
MAIN SIGNAL PATH IN PB

MAIN SIGNAL PATH IN REC



MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PB MODE



COMPARISON CHART OF MODEL & MARK

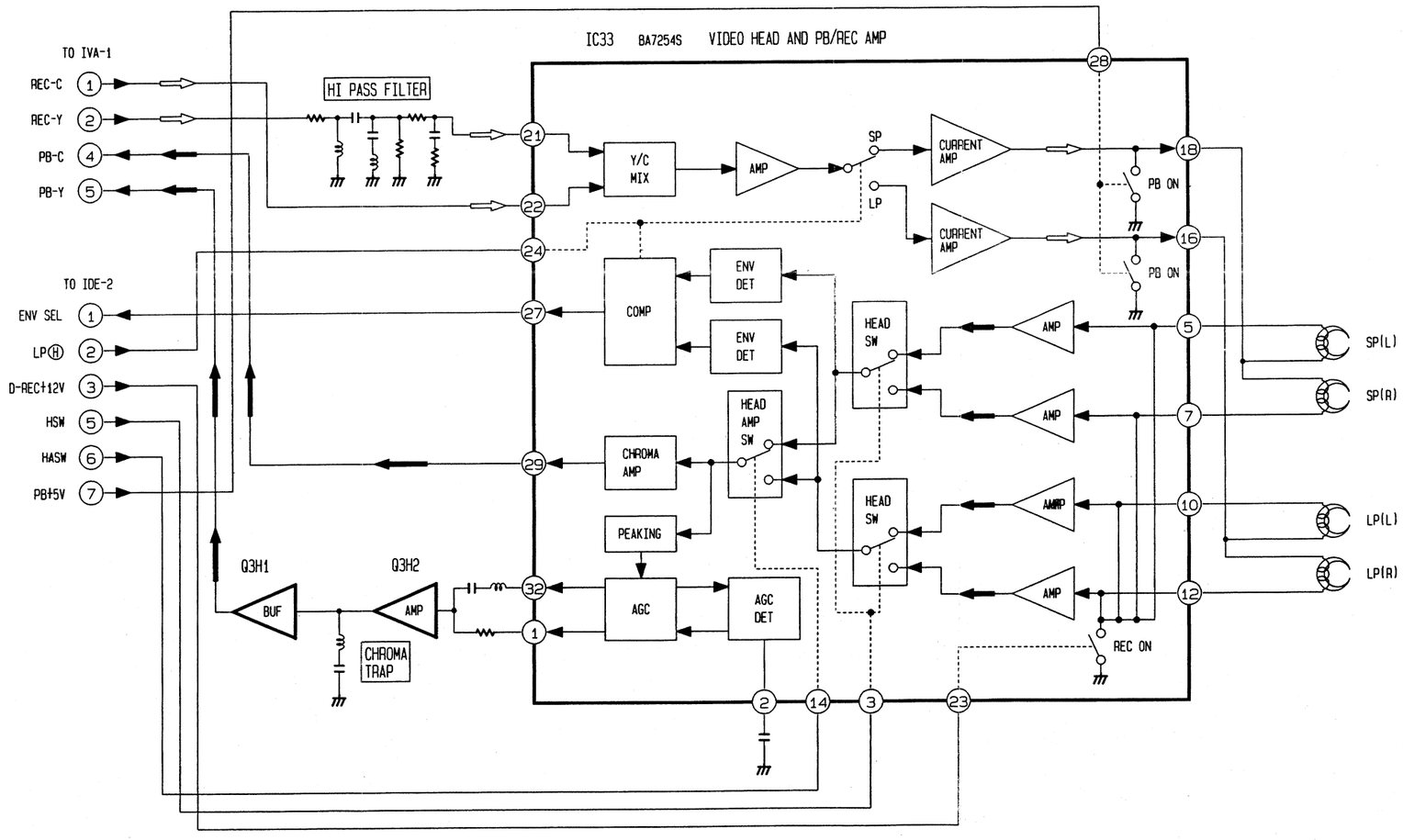
VR6491/08 (A)
VR6491/75 (B)
VR6491/02 (C)
VR6491/69 (D)
MV593 /08 (E)
MV593 /02 (F)
VR6591/75 (K)
MV693 /08 (L)
MV693 /75 (M)
MV693 /02 (N)

-4

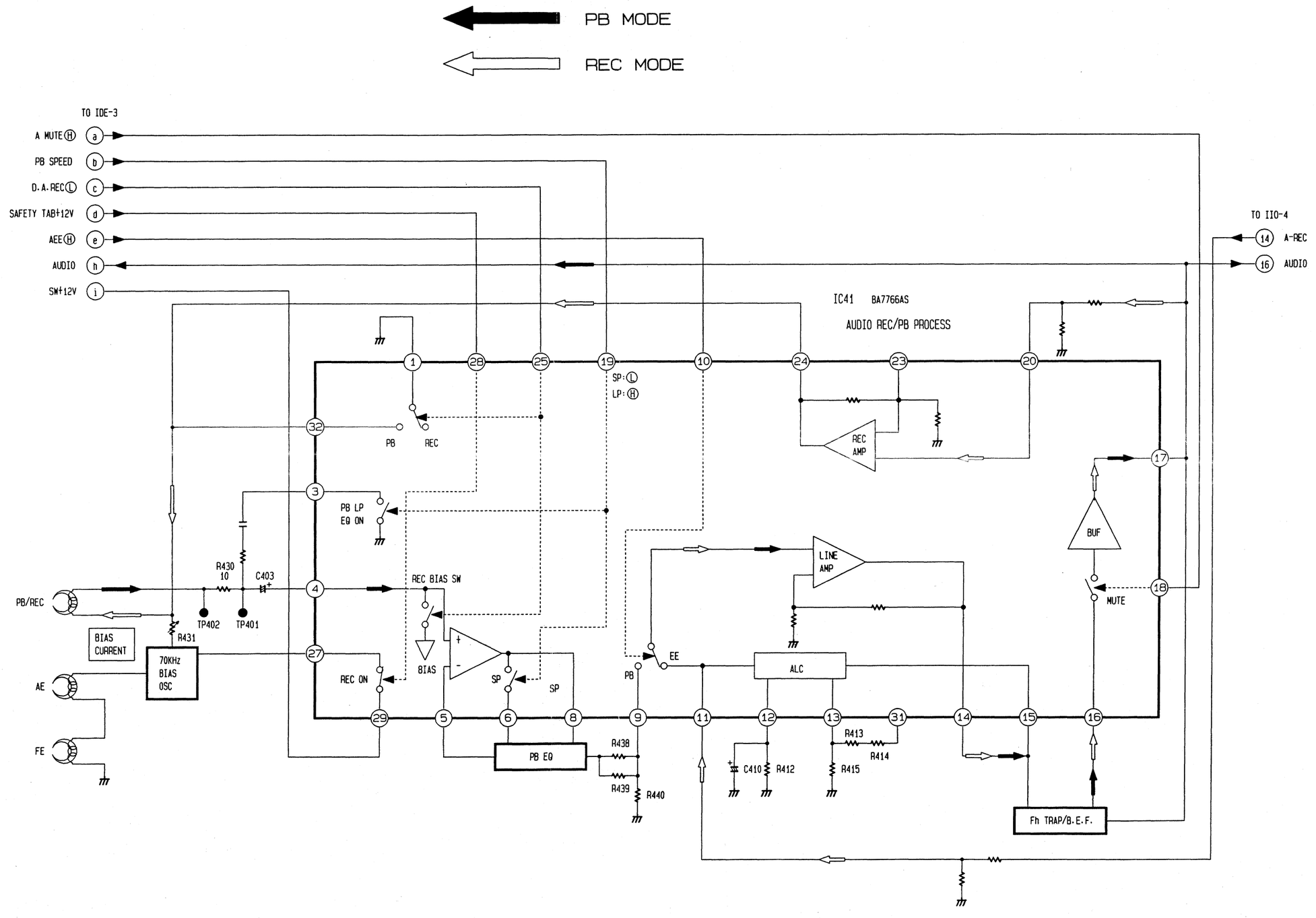
EAD AMPLIFIER BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PB MODE



NORMAL AUDIO BLOCK DIAGRAM

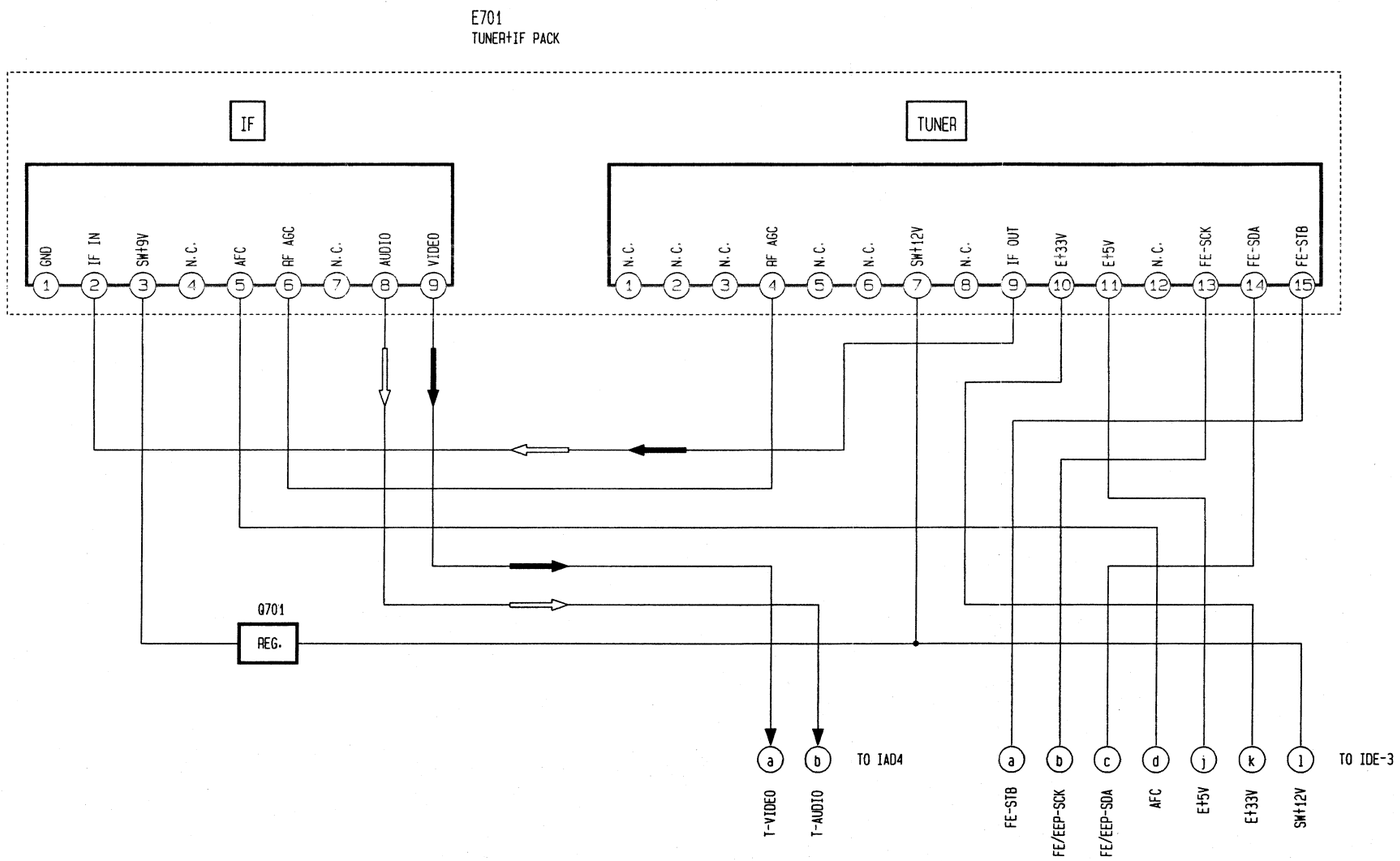


-6

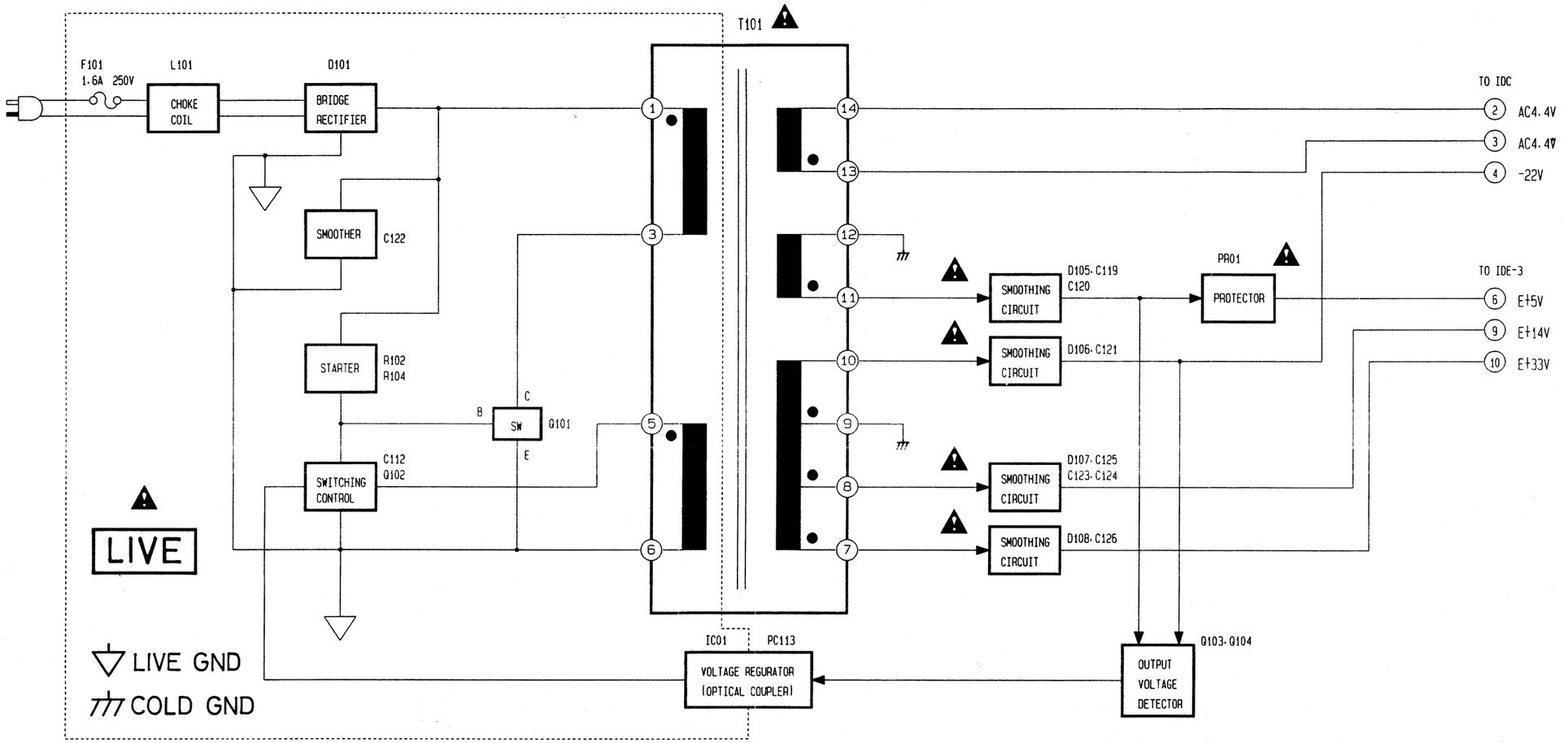
UHF/VHF TUNER/TV DEMODULATOR BLOCK DIAGRAM

VIDEO SIGNAL PATH

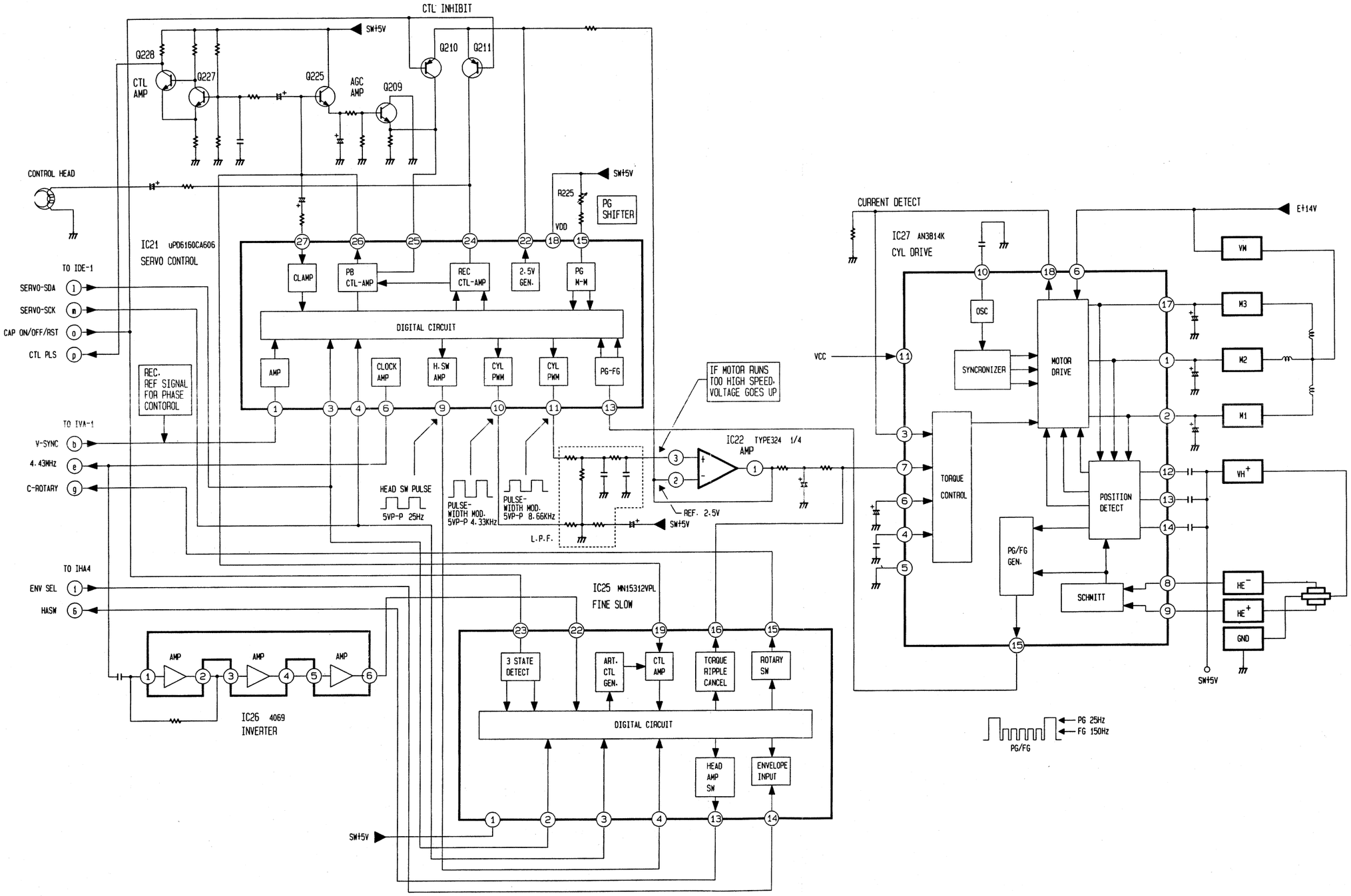
AUDIO SIGNAL PATH



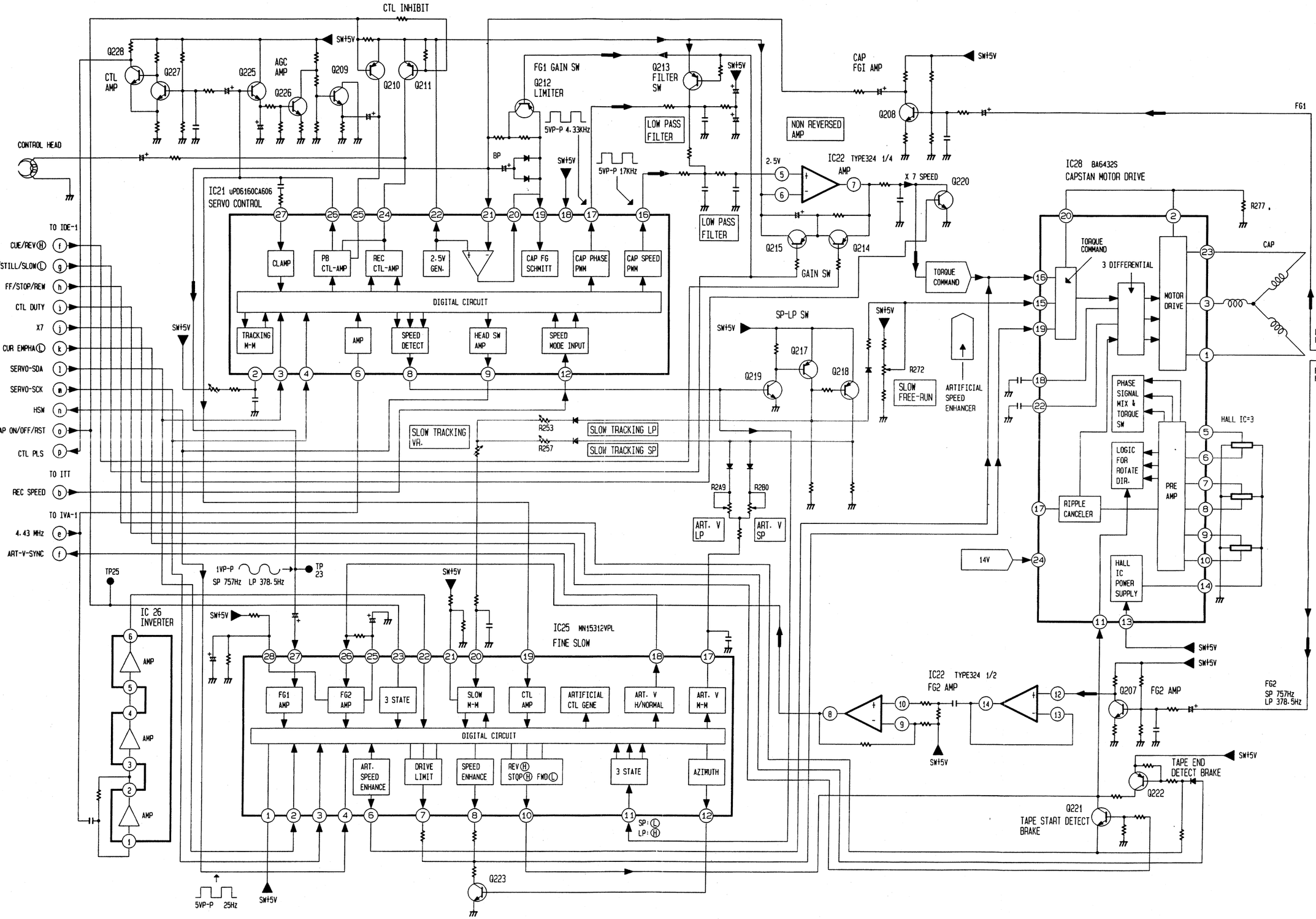
POWER SUPPLY BLOCK DIAGRAM



CYLINDER SERVO BLOCK DIAGRAM

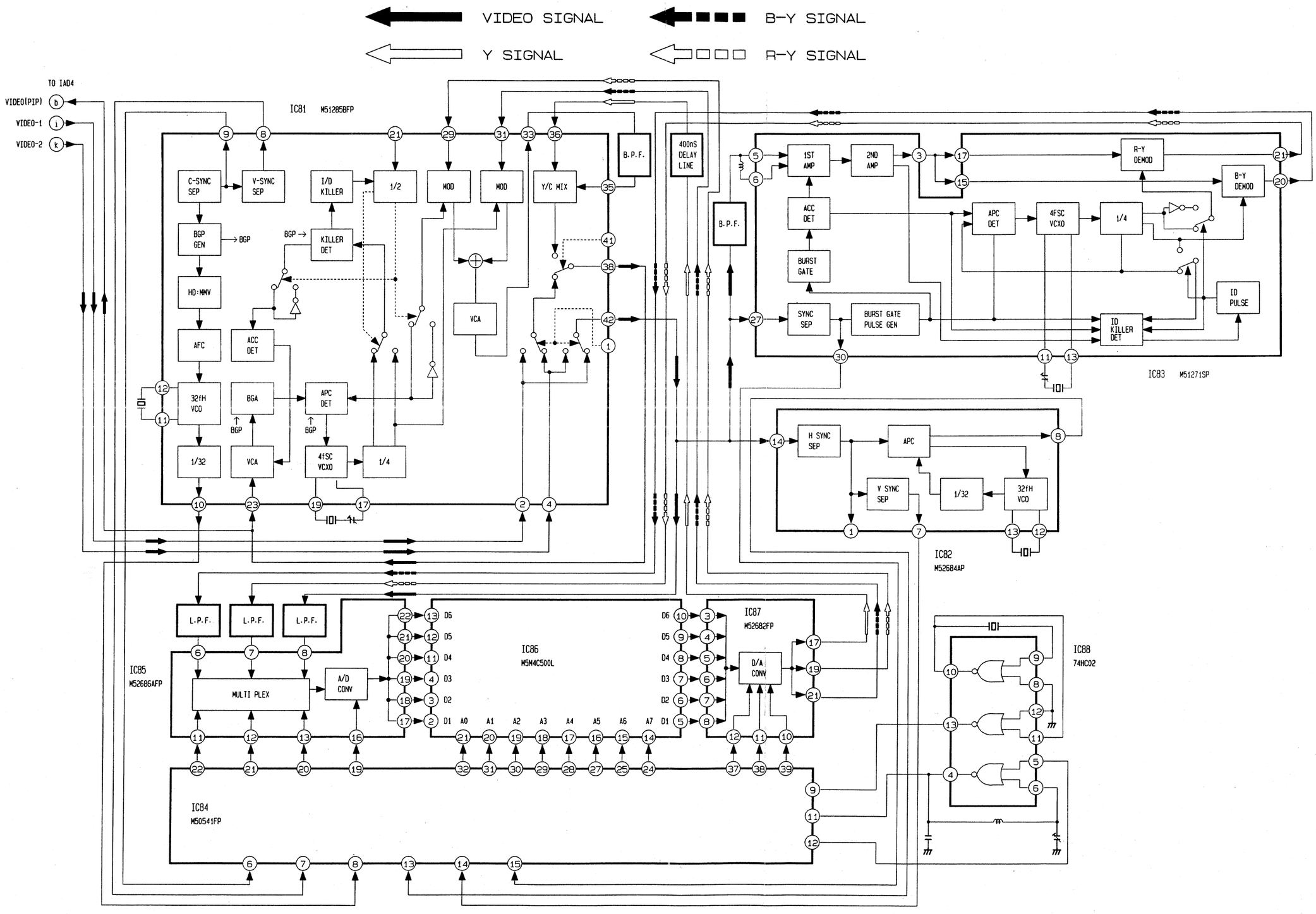


CAPSTAN SERVO BLOCK DIAGRAM

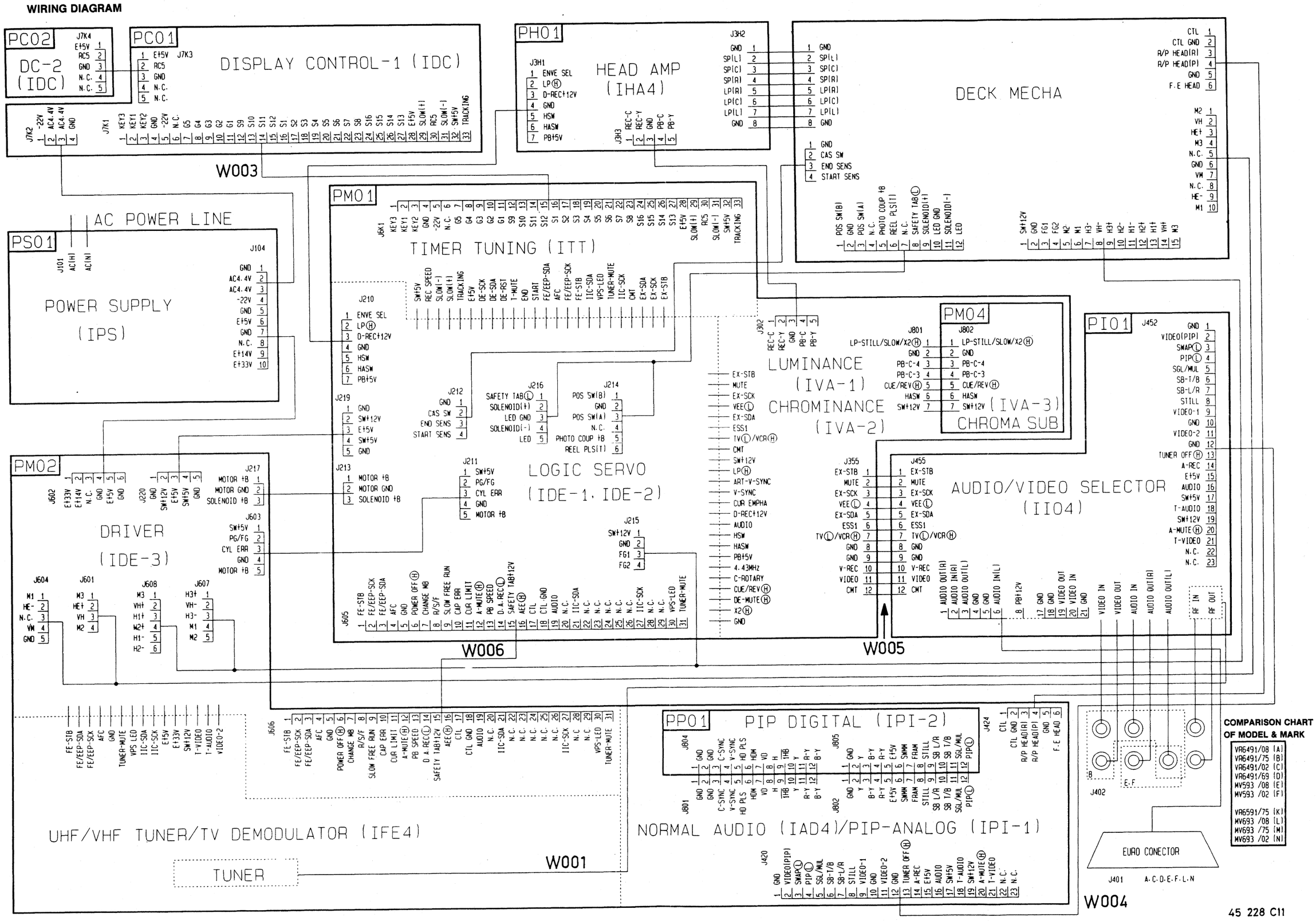


10

P BLOCK DIAGRAM



WIRING DIAGRAM



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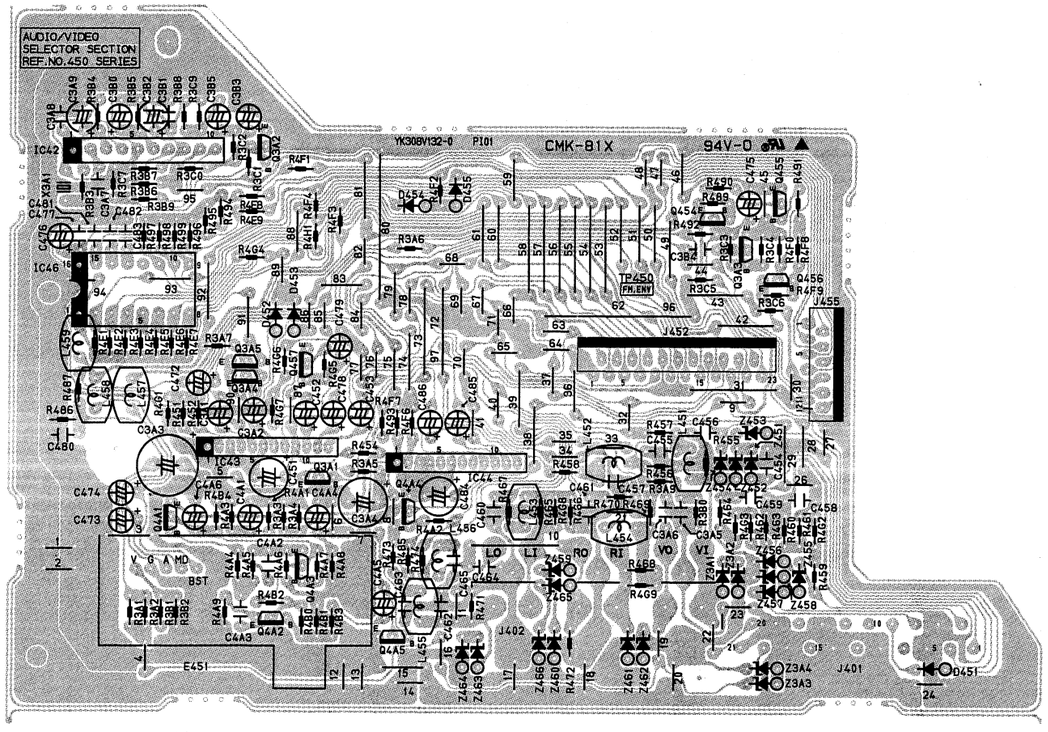
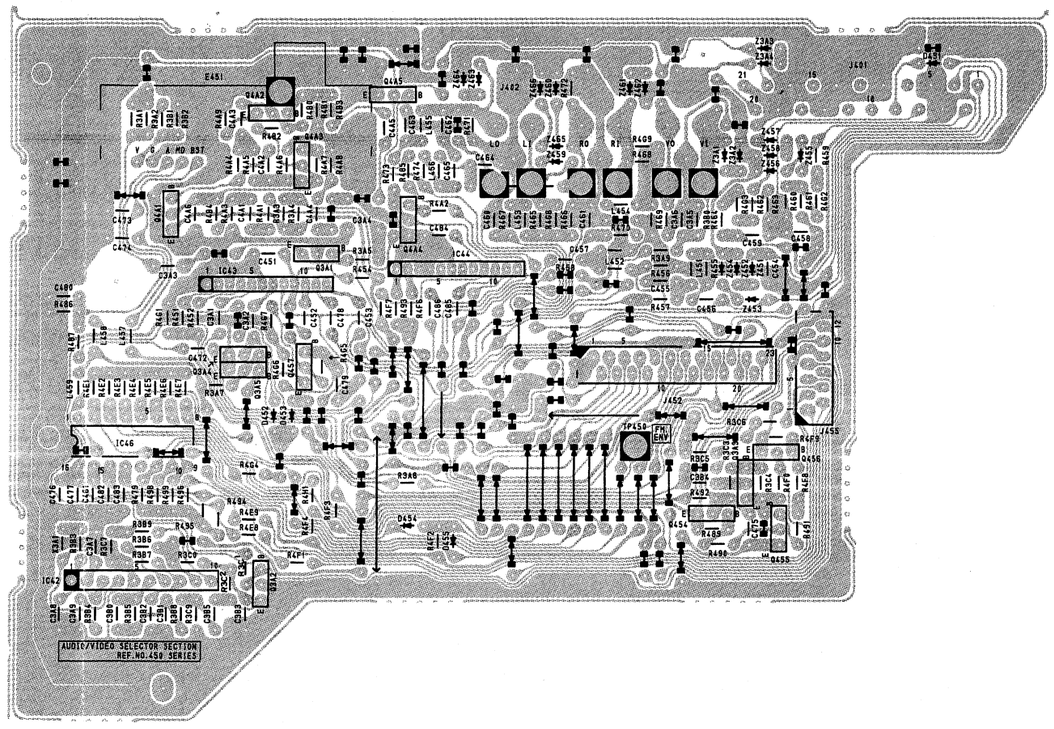
AUDIO/VIDEO SELECTOR P.C.B. DRAWING PI01

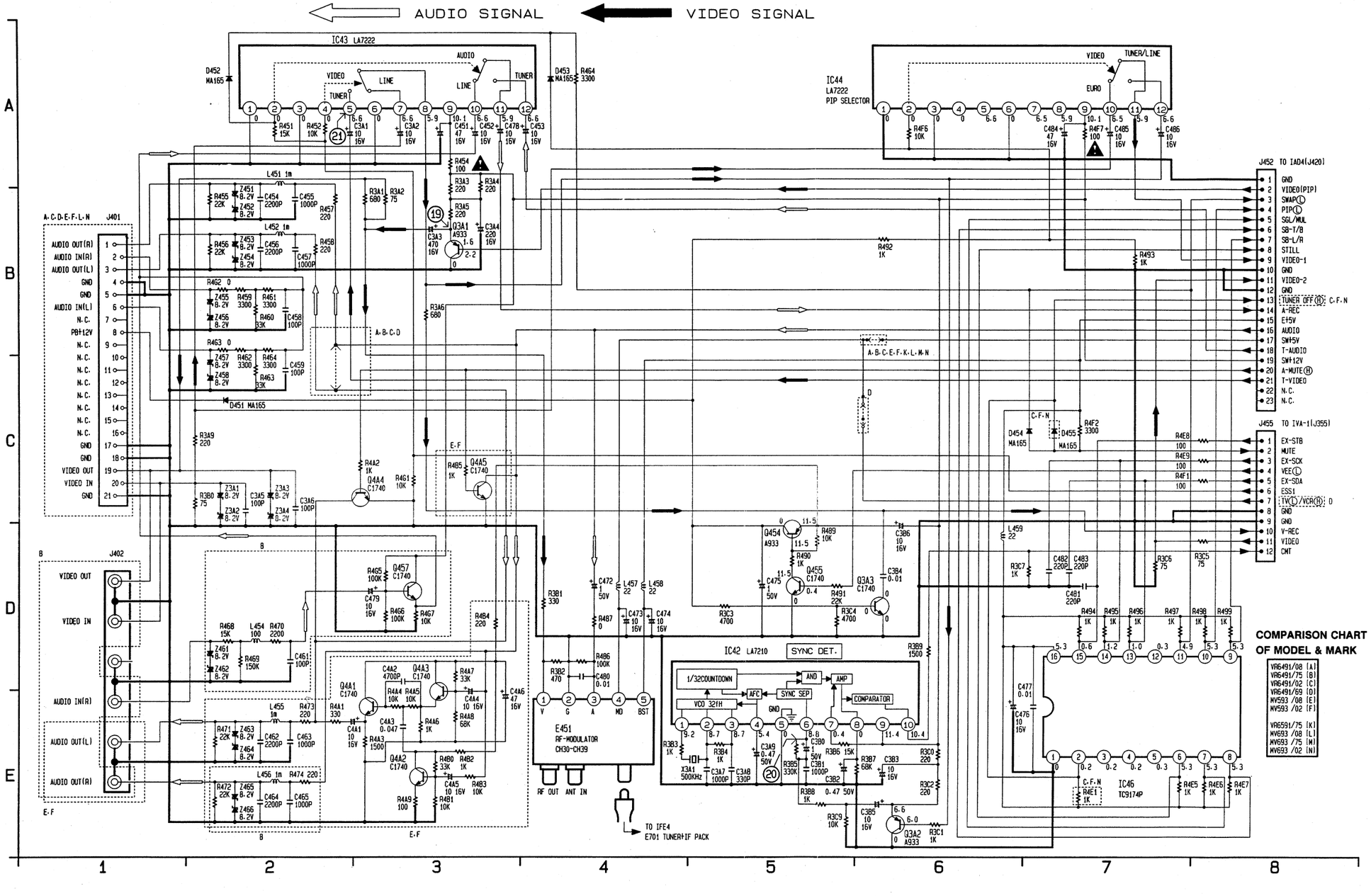
(viewed from the component side)



(viewed from the copper side)



AUDIO/VIDEO SELECTOR SCHEMATIC DIAGRAM (II04) PI01



IC42

	1	2	3	4	5	6	7	8	9	10
MODE										
REC	9.2	8.7	8.7	5.4	0	8.8	0.4	0	11.4	10.4
PLAY	9.2	8.7	8.7	5.4	0	8.8	0.4	0	11.4	10.4
STOP	9.2	8.7	8.7	5.4	0	8.8	0.4	0	11.4	10.4

IC44

	1	2	3	4	5	6	7	8	9	10	11	12
MODE												
REC	0	0	0	0	6.6	0	6.5	5.9	10.1	6.5	5.9	6.6
PLAY	0	5.6	0	0	6.6	0	6.5	5.9	10.1	6.6	5.9	6.5
STOP	0	0	0	0	6.6	0	6.5	5.9	10.1	6.5	5.9	6.6

IC43

	1	2	3	4	5	6	7	8	9	10	11	12
MODE												
REC	0	0	0	0	6.6	0	6.6	5.9	10.1	6.6	5.9	6.6
PLAY	0	0	0	0	6.6	0	6.6	5.9	10.1	6.6	5.9	6.6
STOP	0	0	0	0	6.6	0	6.6	5.9	10.2	6.6	5.9	6.6

IC46

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0	0.2	0.2	0.2	0.3	5.3	5.3	5.3	5.3	5.3	4.9	0.3	1.0	1.2
PLAY	0	0.2	0.2	0.2	0.2	5.3	5.3	5.3	5.3	5.3	4.9	0.3	1.0	1.2
STOP	0	0.2	0.2	0.2	0.2	5.3	5.3	5.3	5.3	5.3	4.9	0.3	1.0	1.2

IC46

	15	16
MODE		
REC	0.6	5.3
PLAY	0.6	5.3
STOP	0.6	5.3

Q3A1 / Q3A2 / Q3A3

	Q3A1			Q3A2			Q3A3		
	E	B	C	E	B	C	E	B	C
MODE									
REC	1.6	2.2	0	6.6	6.0	0	0	0	0
PLAY	2.2	2.3	0	6.6	6.0	0	0	0.8	0
STOP	1.6	2.2	0	6.6	6.0	0	0	0	0

Q454 / Q455

	Q454			Q455		
	E	B	C	E	B	C
MODE						
REC	11.5	11.5	0	0	0.4	11.5
PLAY	10.7	11.5	11.5	0	0.7	0.1
STOP	11.5	11.5	0	0	0.3	11.6

Transistors

Q3A1	B3
Q3A2	E6
Q3A3	D6
Q4A1	E2
Q4A2	E3
Q4A3	D3
Q4A4	C3
Q4A5	C3
Q454	D5
Q455	D5
Q457	D3

ICs

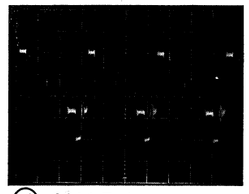
IC42	D5
IC43	A2
IC44	A5
IC46	E7

Diodes

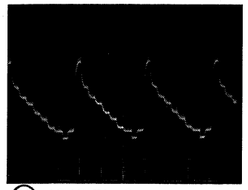
D451	C2
D452	A2
D453	A4
D454	C7
D455	C7

ZENERS

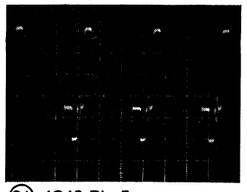
Z3A1	C2
Z3A2	C2
Z3A3	C2
Z3A4	C2
Z451	B2
Z452	B2
Z453	B2
Z454	B2
Z455	B2
Z456	B2
Z457	B2
Z458	C2
Z461	D2
Z462	D2
Z463	E2
Z464	E2
Z465	E2
Z466	E2



⑲ Q3A1 Emitter
500mV/Div 20µSec/Div



⑳ IC42 Pin 6
200mV/Div 20µSec/Div

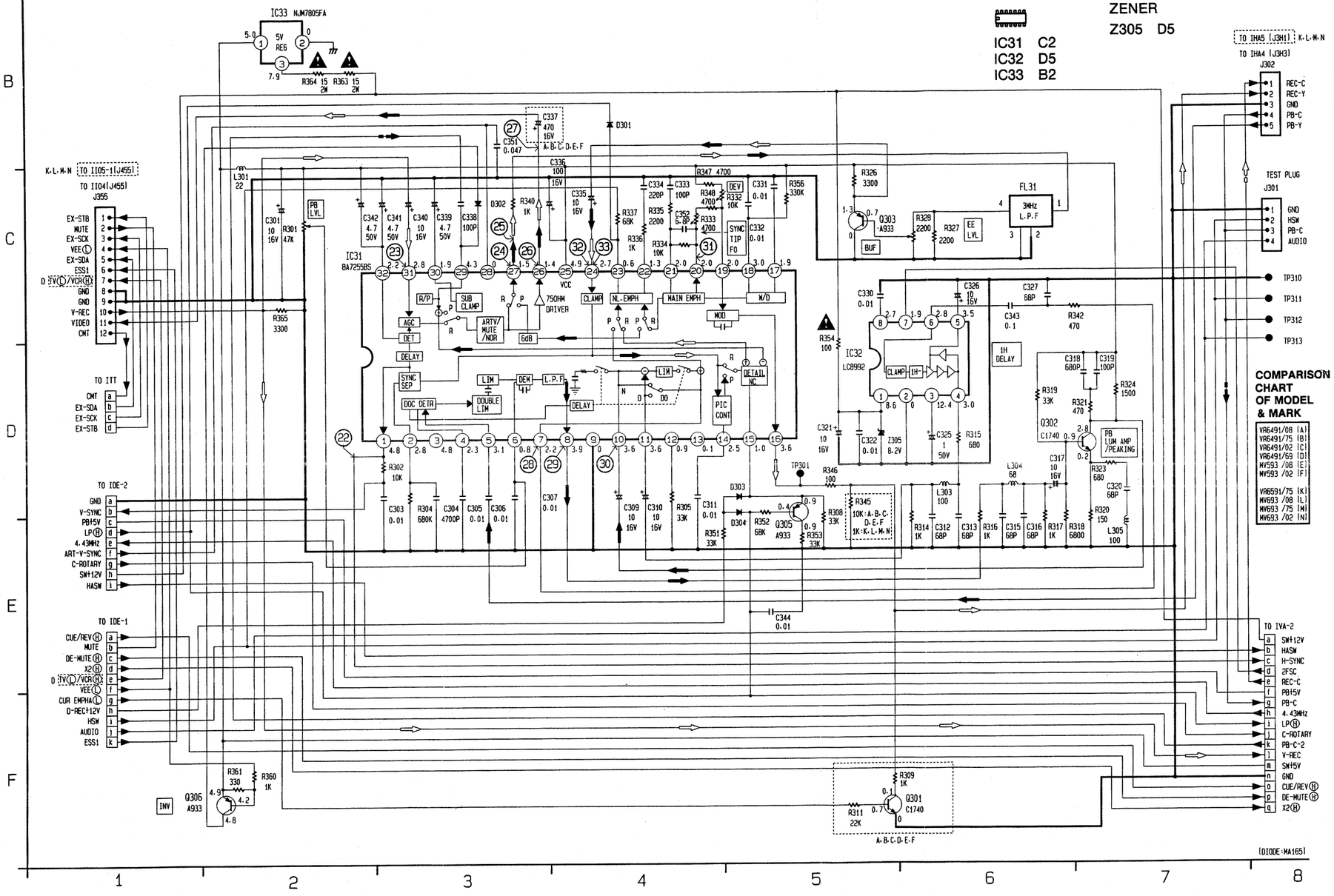


㉑ IC43 Pin 5
200mV/Div 20µSec/Div

LUMINANCE SCHEMATIC DIAGRAM (IVA-1) PM01

MAIN SIGNAL PATH IN PB Y MODE — PB C MODE

MAIN SIGNAL PATH IN REC Y MODE — REC C MODE



Q301 F6
Q302 D6
Q303 C5
Q305 E5
Q306 F1

IC31 C2
IC32 D5
IC33 B2

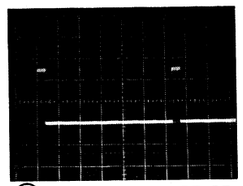
D301 B4
D302 C3
D303 D5
D304 E5

ZENER
Z305 D5

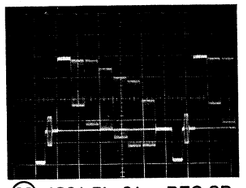
TESTPOINTS
TP301 D5
TP310 C8
TP311 C8
TP312 C8
TP313 C8

COMPARISON CHART OF MODEL & MARK

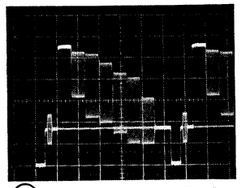
VR6491/08 (A)
VR6491/75 (B)
VR6491/02 (C)
VR6491/69 (D)
WV593 /08 (E)
WV593 /02 (F)
VR6591/75 (K)
WV693 /08 (L)
WV693 /75 (M)
WV693 /02 (N)



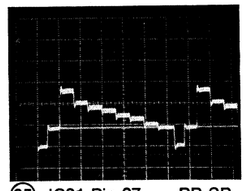
(22) IC31 Pin 1 PB SP
2V/Div 10µSec/Div



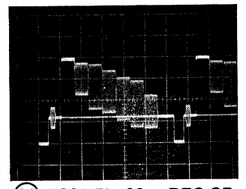
(23) IC31 Pin 31 REC SP
200mV/Div 10µSec/Div



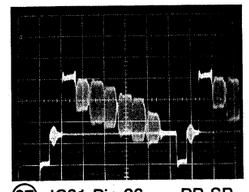
(24) IC31 Pin 27 REC SP
200mV/Div 10µSec/Div



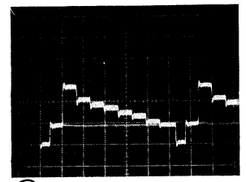
(25) IC31 Pin 27 PB SP
500mV/Div 10µSec/Div



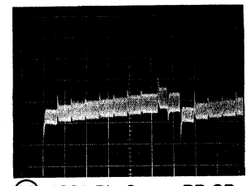
(26) IC31 Pin 26 REC SP
500mV/Div 10µSec/Div



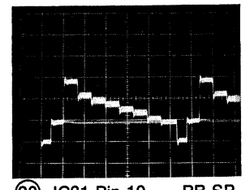
(27) IC31 Pin 26 PB SP
500mV/Div 10µSec/Div



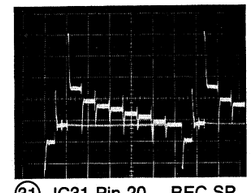
(28) IC31 Pin 7 PB SP
200mV/Div 10µSec/Div



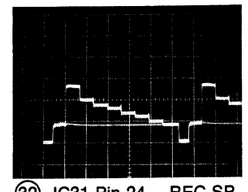
(29) IC31 Pin 8 PB SP
200mV/Div 10µSec/Div



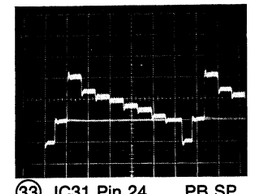
(30) IC31 Pin 10 PB SP
200mV/Div 10µSec/Div



(31) IC31 Pin 20 REC SP
200mV/Div 10µSec/Div



(32) IC31 Pin 24 REC SP
200mV/Div 10µSec/Div



(33) IC31 Pin 24 PB SP
200mV/Div 10µSec/Div

IC31

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	4.8	2.8	2.3		3.1	0.8	2.2	3.9	0	3.6	3.6	0.9	0.1	2.5
PLAY	0.4	2.8	4.7	3.0	3.1	0.8	2.2	3.4	0	3.6	3.6	0.8	0.1	2.5
STOP	4.8	2.9	2.7	2.6	3.1	0.8	2.2	3.9	0	3.6	3.6	0.9	0.1	2.5

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	1.0	3.6	1.9	3.0	2.0	2.0	2.0	1.3	0.6	2.7	4.9	1.4	1.5	0
PLAY	0.9	4.0	1.9	3.0	2.0	2.1	2.1	1.5	0.6	3.0	4.9	2.3	2.6	0
STOP	0.9	3.7	1.9	3.0	2.0	2.0	2.0	1.3	0.6	2.7	4.9	1.4	1.5	0

IC31

	29	30	31	32
MODE				
REC	4.3	1.9	2.8	2.2
PLAY	3.0	1.7	2.8	2.9
STOP	4.3	1.9	2.8	2.2

IC32

	1	2	3	4	5	6	7	8
MODE								
REC	8.6	0	12.4	3.0	3.5	2.8	1.9	2.7
PLAY	8.6	0	10.7	3.0	3.8	3.2	1.9	2.7
STOP	8.6	0	10.9	3.0	3.6	3.7	2.1	2.7

IC33

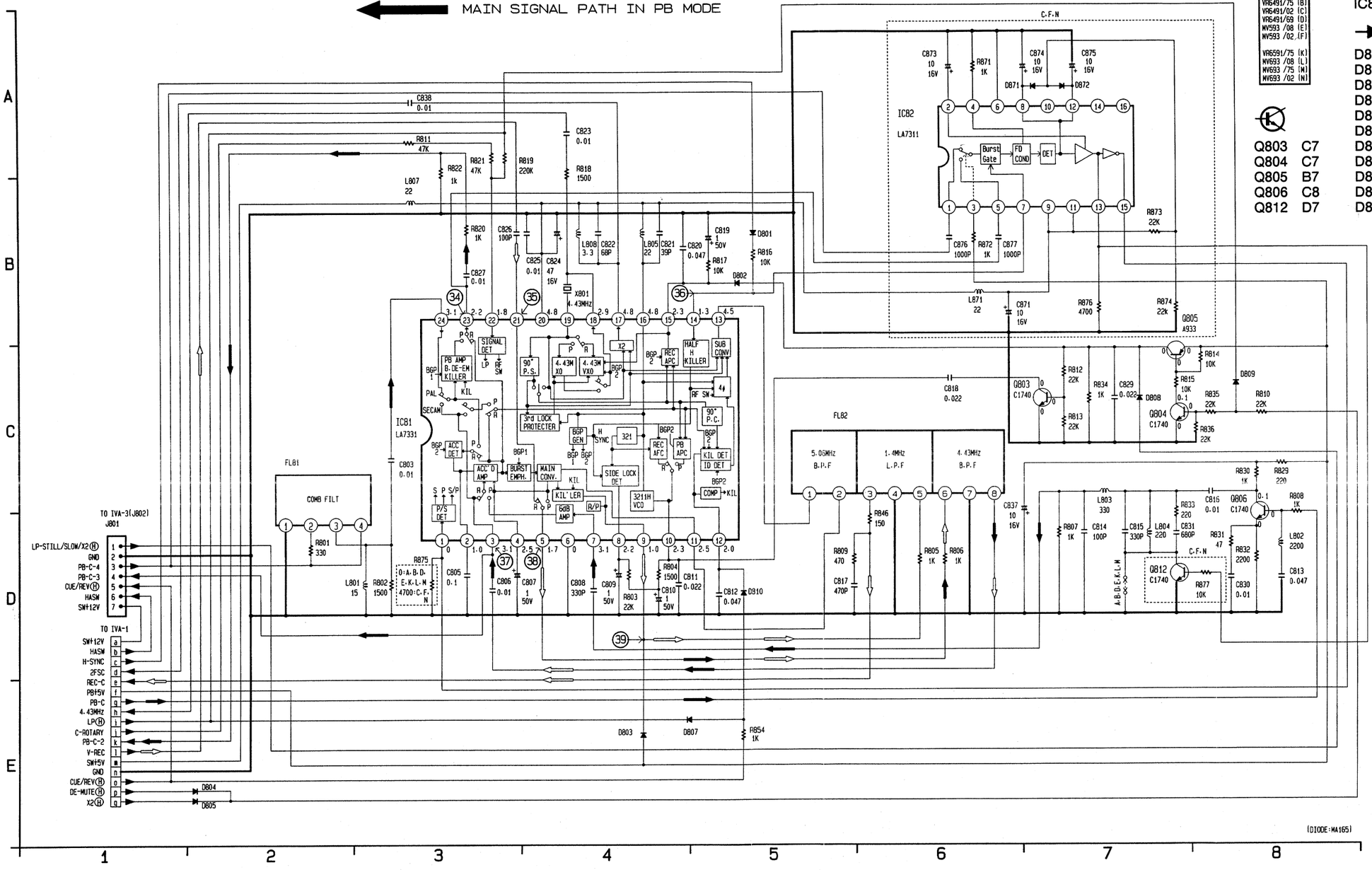
	1	2	3
MODE			
REC	5.0	7.9	0
PLAY	5.0	7.9	0
STOP	5.0	7.9	0

	Q301			Q302			Q303			Q305			Q306		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	0	0.7	0.1	0.2	0.9	2.8	1.3	0.7	0	0.9	0.4	0.9	4.9	4.2	4.8
PLAY	0	0.7	0.1	0.2	0.8	2.8	1.7	0	1.1	0.9	0.4	0.9	4.9	4.8	0.1
STOP	0	0.1	2.1	0.2	0.8	2.8	1.3	0.7	0	0.9	0.4	0.9	4.8	4.2	4.8

CHROMINANCE SCHEMATIC DIAGRAM (IVA-2) PM01

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PB MODE



IC81

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0	1.0	3.1	2.5	1.7	0	3.1	2.2	1.0	2.3	2.5	2.3	4.5	1.3
PLAY	0.1	1.0	3.1	2.5	2.7	0.1	3.1	2.9	4.7	2.3	2.6	2.0	4.5	1.2
STOP	0.1	1.0	3.1	2.5	2.7	0.1	3.1	2.4	4.7	2.4	2.6	2.0	4.5	1.2

	15	16	17	18	19	20	21	22	23	24
MODE										
REC	2.3	4.8	4.8	2.9		4.8	1.7		2.2	3.1
PLAY	2.3	4.8	4.8	2.9		4.8	1.6		0	3.2
STOP	2.4	4.8	4.8	2.9	3.8	4.8	1.7		2.0	3.3

	Q803			Q804			Q805			Q806		
	E	B	C	E	B	C	E	B	C	E	B	C
MODE												
REC	0	0	0	0	0	0.1	0	0	0	0	0	0.1
PLAY	0	0	0	0	0.3	5.3	5.3	5.3	0	2.5	3.1	4.0
STOP	0	0	0	0	0	5.3	5.3	5.3	0.1	2.5	3.1	4.0

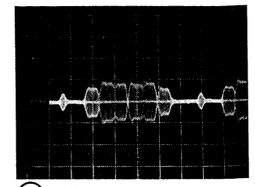
COMPARISON CHART OF MODEL & MARK

VR6491/08 (A)
VR6491/75 (B)
VR6491/02 (C)
VR6491/69 (D)
MV593 /08 (E)
MV593 /02 (F)
VR6591/75 (K)
MV693 /08 (L)
MV693 /75 (N)
MV693 /02 (N)

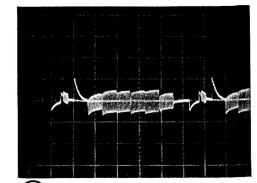
IC81 C3
IC82 A6

D801	B5
D802	B5
D803	E4
D804	E2
D805	E2
D807	E4
D808	C7
D809	C8
D810	D5
D871	A6
D872	A7

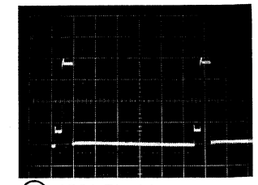
Q803	C7
Q804	C7
Q805	B7
Q806	C8
Q812	D7



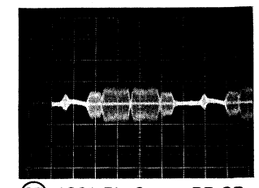
(34) IC81 Pin 23 PB SP
500mV/Div 10µSec/Div



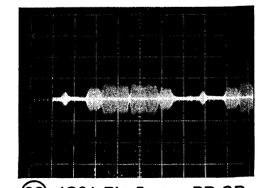
(35) IC81 Pin 21 REC SP
500mV/Div 10µSec/Div



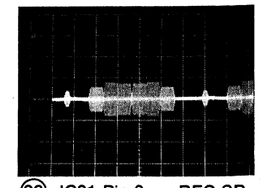
(36) IC81 Pin 14
1V/Div 10µSec/Div



(37) IC81 Pin 3 PB SP
100mV/Div 10µSec/Div



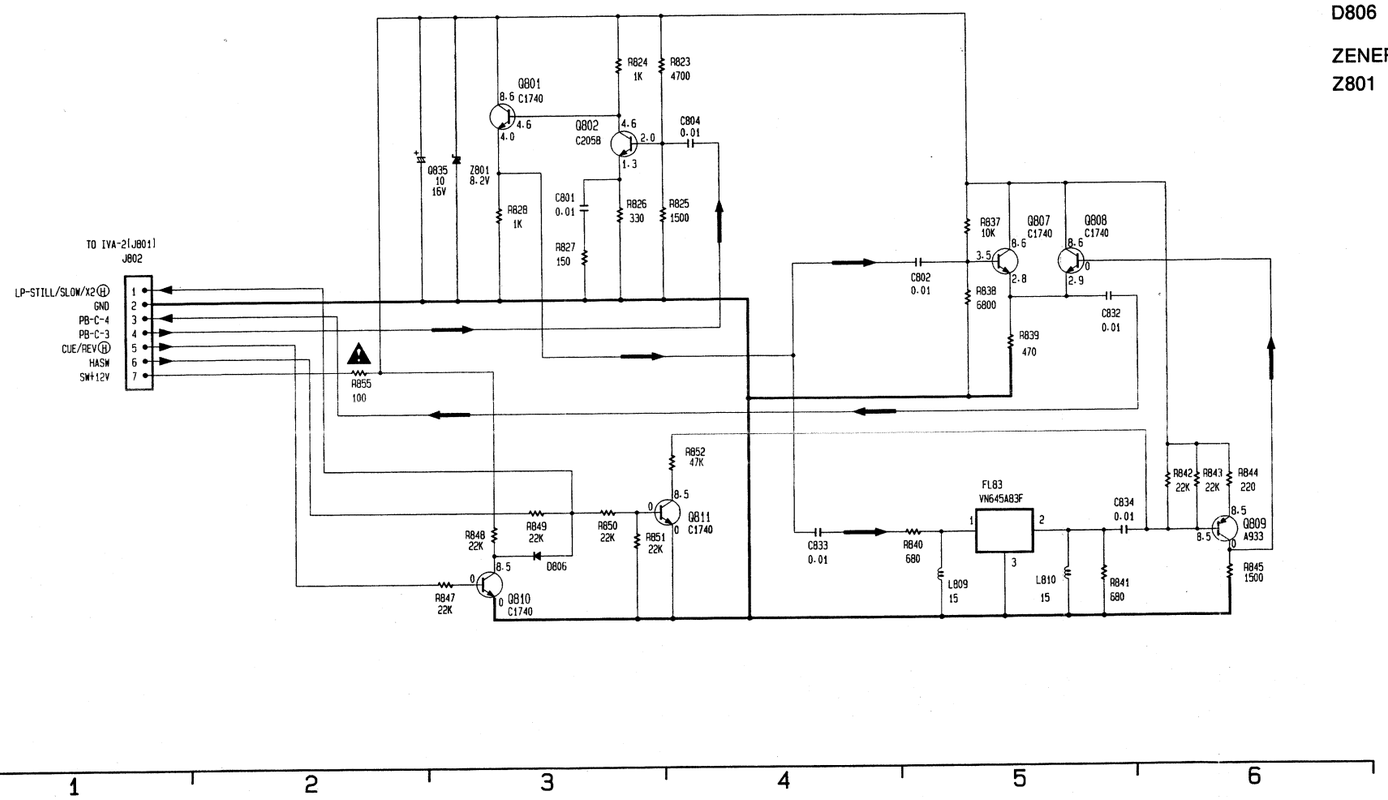
(38) IC81 Pin 5 PB SP
500mV/Div 10µSec/Div



(39) IC81 Pin 9 REC SP
500mV/Div 10µSec/Div

CHROMINANCE SUB SCHEMATIC DIAGRAM (IVA-3) PM04

MAIN SIGNAL PATH IN PB MODE

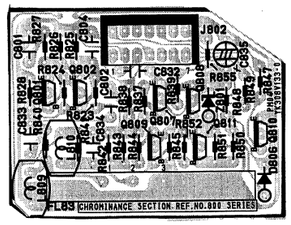


Q801 B3
Q802 B3
Q807 B5
Q808 B5
Q809 C6
Q810 D3
Q811 C4

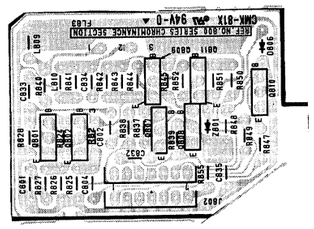
D806 D3

ZENER
Z801 B3

(viewed from the component side)



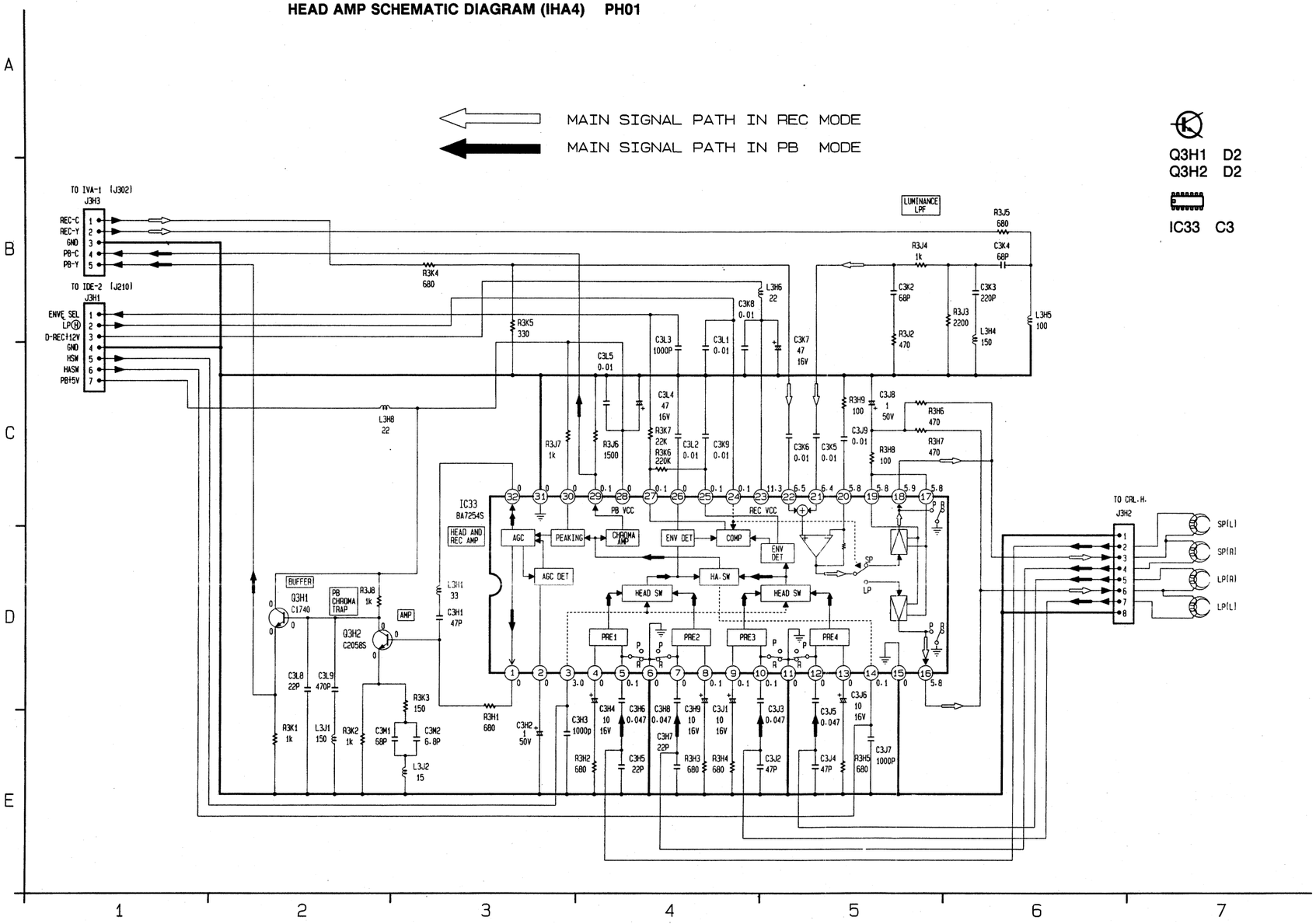
(viewed from the copper side)



	Q801			Q802			Q807			Q808			Q809		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	4.0	4.6	8.6	1.3	2.0	4.6	2.8	3.5	8.6	2.9	0	8.6	8.5	8.5	0
PLAY	4.2	4.6	8.6	1.3	2.0	4.6	2.9	3.5	8.5	2.9	0	8.6	8.5	8.6	0
STOP	4.0	4.6	8.6	1.3	2.1	4.6	2.9	3.5	8.6	2.9	0	8.6	8.5	8.5	0

	Q810			Q811		
	E	B	C	E	B	C
MODE						
REC	0	0	8.5	0	0	8.5
PLAY	0	0	8.5	0	0	8.5
STOP	0	0	8.5	0	0	8.5

HEAD AMP SCHEMATIC DIAGRAM (IHA4) PH01



IC33

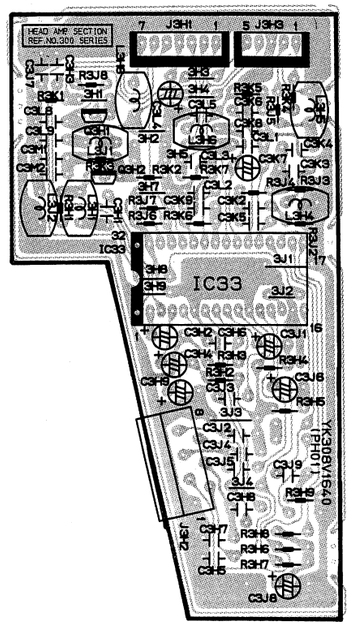
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0	0	3.0	0	0.1	0	0	0.1	0.1	0.1	0	0	0	0.1
PLAY	1.9	3.4	3.9	0.8	0.7	0	0.7	0.8	0.8	0.7	0	0.7	0.8	0
STOP	1.9	3.2	5.2	0.8	0.7	0	0.7	0.8	0.8	0.7	0	0.7	0.8	2.0

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	0	5.8	5.8	5.9	5.8	5.8	6.4	6.5	11.3	0.1	0.1	0	0.1	0
PLAY	0	0	0	0	0	0	0	0	0.1	0.1	2.6	2.6	5.1	5.3
STOP	0	0	0	0	0	0	0	0	0.1	0.1	2.6	2.6	0.1	5.3

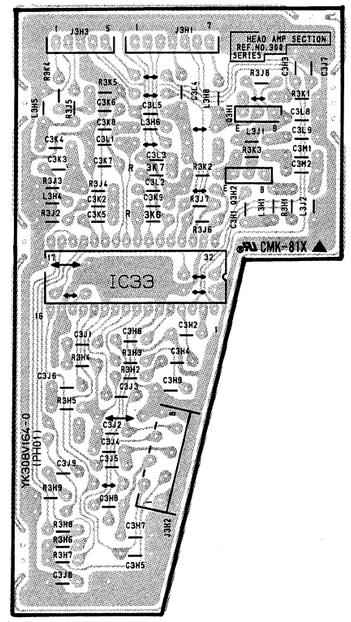
	29	30	31	32
MODE				
REC	0.1	0	0	0
PLAY	3.1	5.0	0	3.5
STOP	3.1	5.0	0	3.5

	Q3H1			Q3H2		
	E	B	C	E	B	C
MODE						
REC	0	0	0	0	0	0
PLAY	3.5	4.2	5.3	1.2	1.8	4.1
STOP	3.5	4.2	5.3	1.2	1.8	4.2

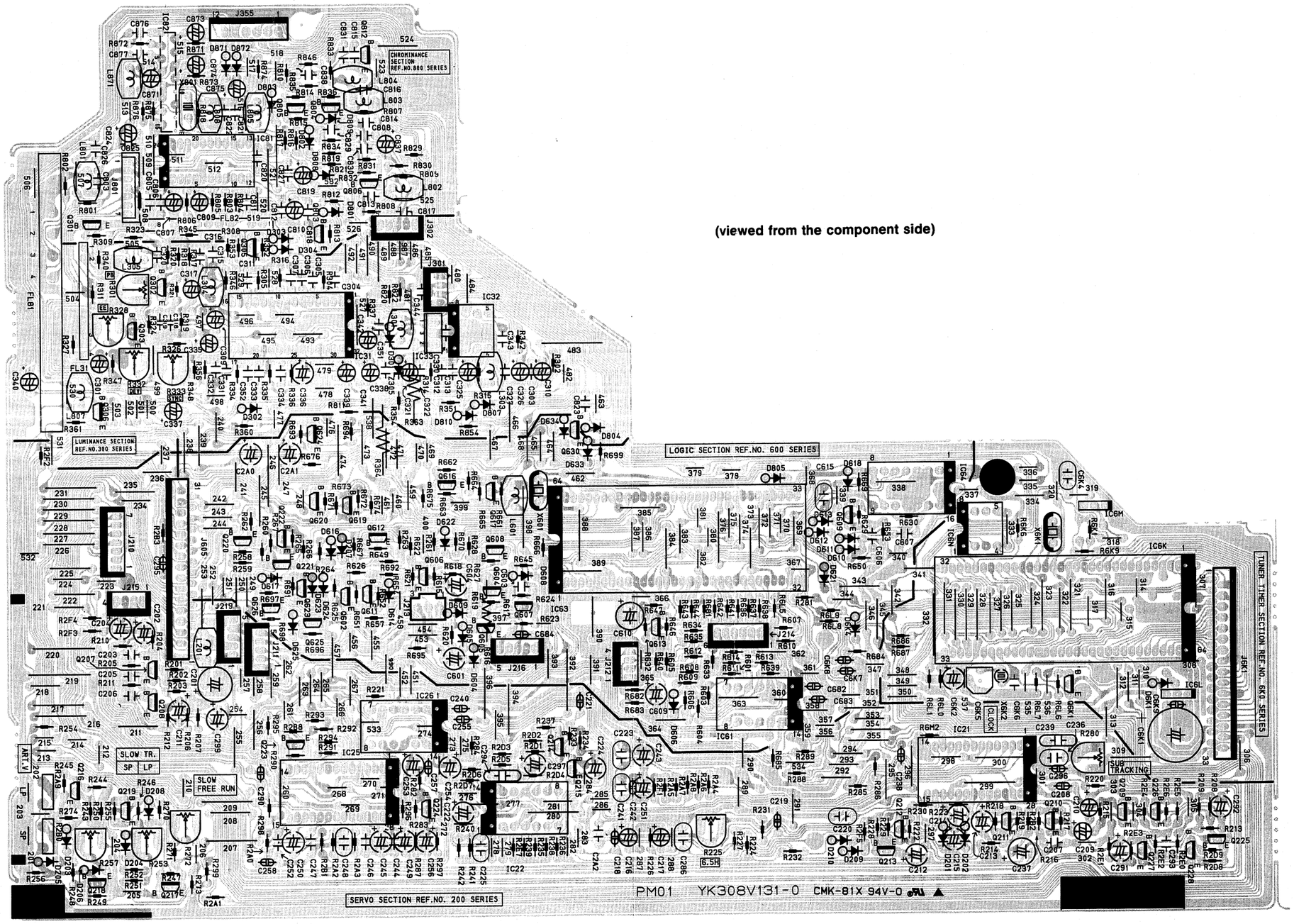
(viewed from the component side)



(viewed from the copper side)



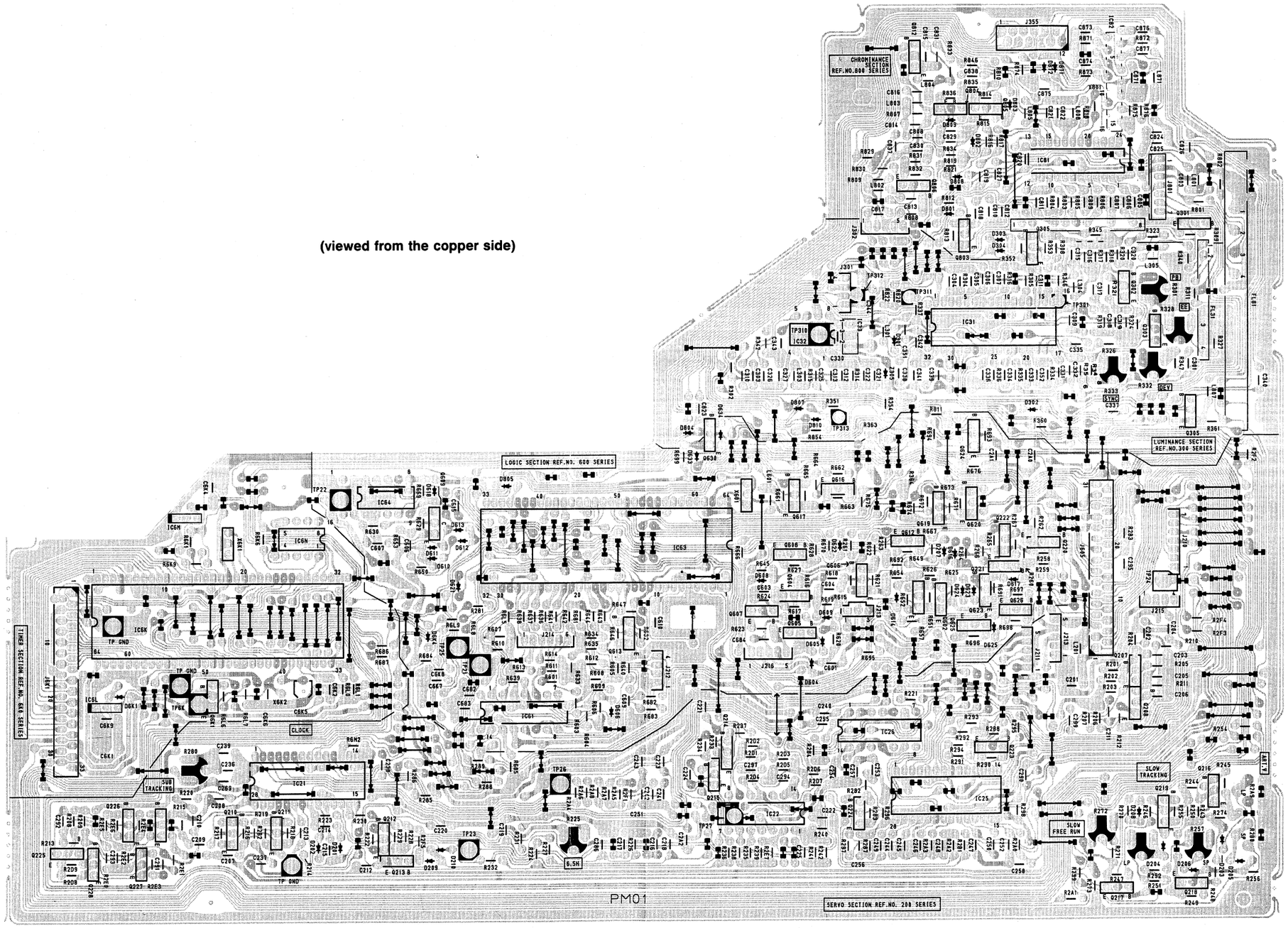
UMINANCE/CHROMINANCE/TUNER TIMER/LOGIC/SERVO (IDE - 1 & 2) P.C.B. DRAWING PMO1



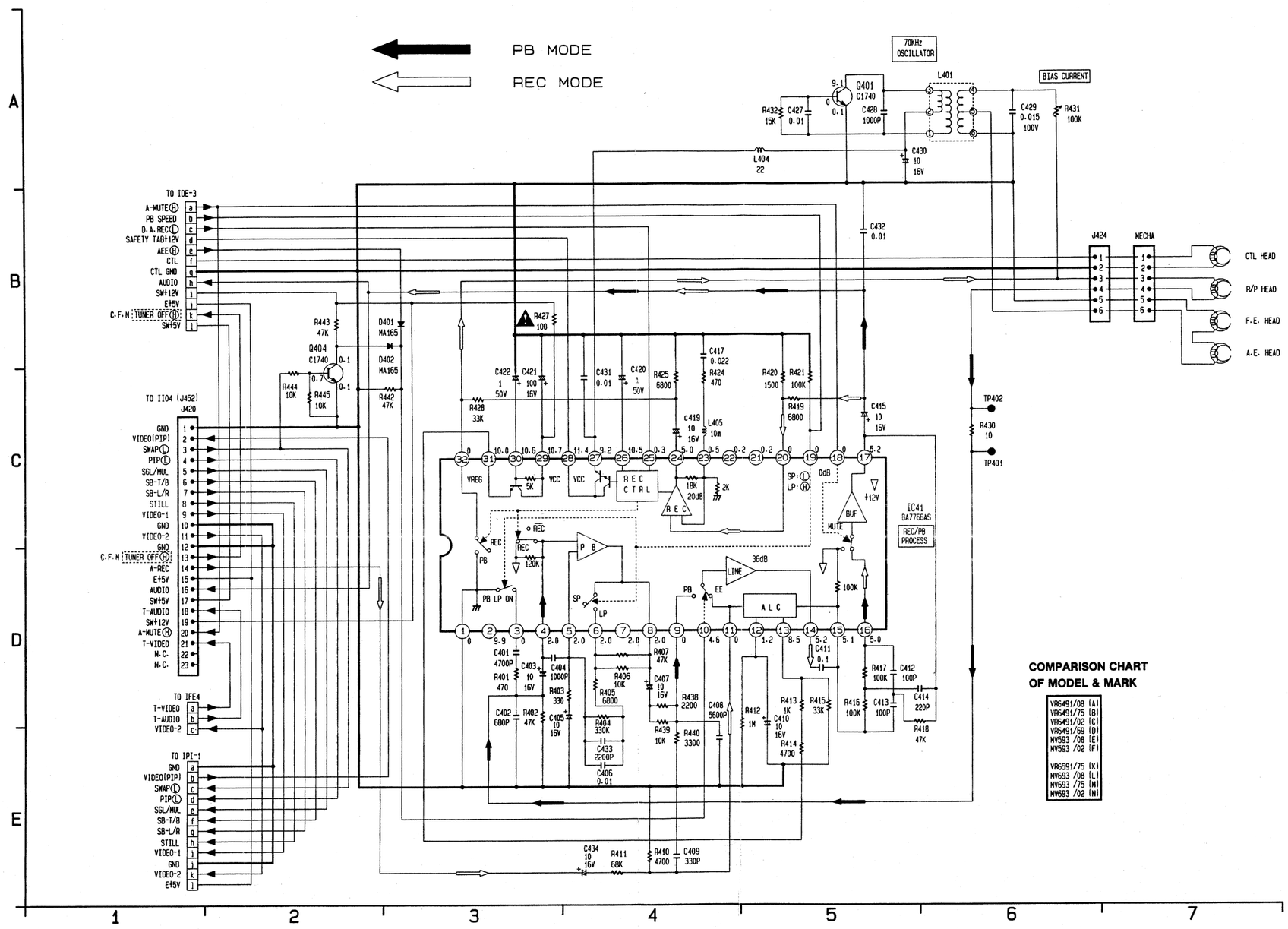
(viewed from the component side)

LUMINANCE/CHROMINANCE/TUNER TIMER/LOGIC/SERVO (IDE - 1 & 2) P.C.B. DRAWING PMO1

(viewed from the copper side)



NORMAL AUDIO SCHEMATIC DIAGRAM (IAD4) PM02



Q401 A5
Q404 B2

IC41 C5

D401 B3
D402 B3

TESTPOINTS
TP401 C6
TP402 C6

COMPARISON CHART OF MODEL & MARK

VR6491/08	(A)
VR6491/75	(B)
VR6491/02	(C)
VR6491/69	(D)
MV693 /08	(E)
MV693 /02	(F)
VR6591/75	(K)
MV693 /08	(L)
MV693 /75	(M)
MV693 /02	(N)

IC41

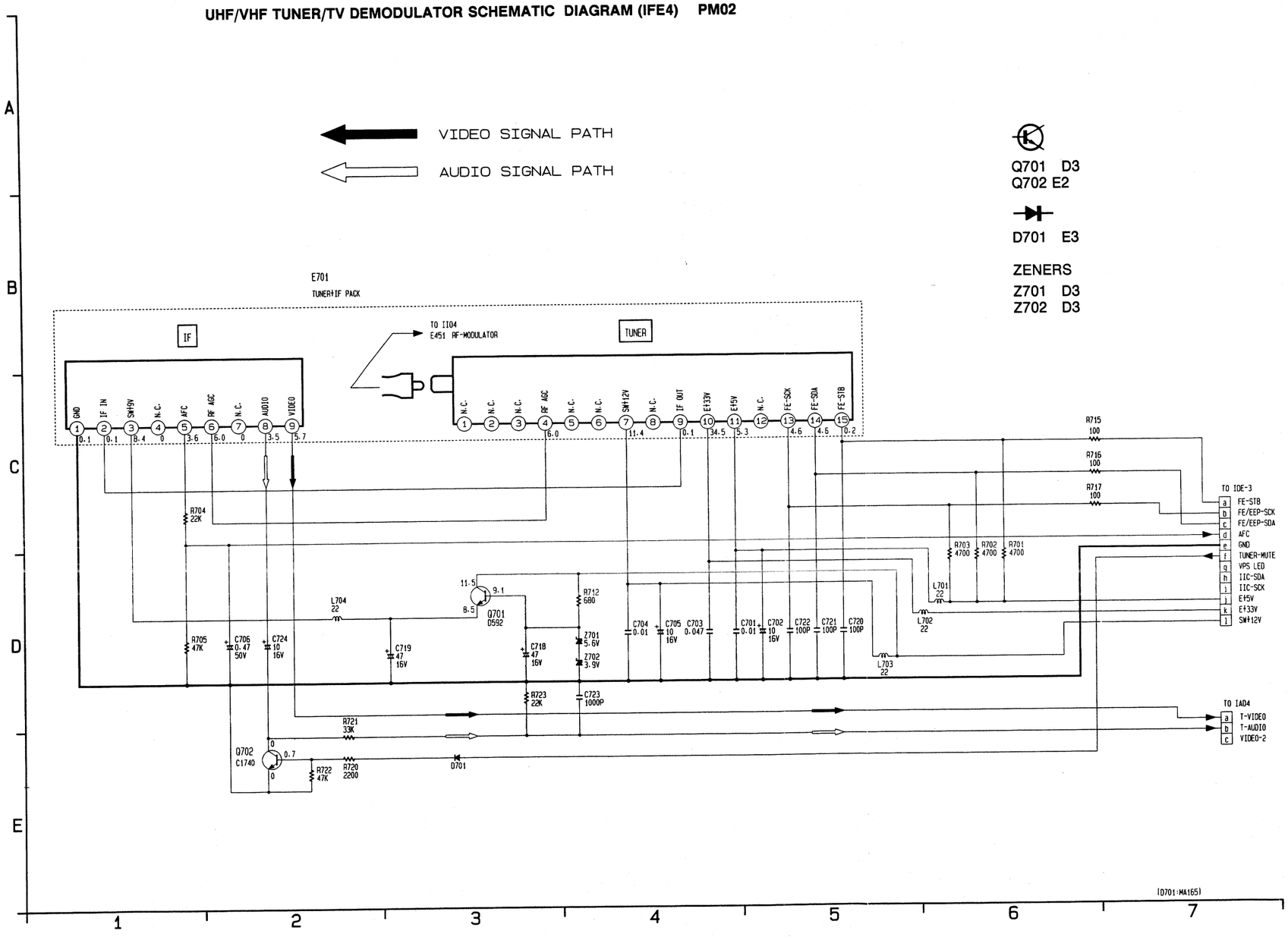
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0	9.9	0	2.0	2.0	2.0	2.0	2.0	0	4.6	0	1.2	8.5	5.2
PLAY	0	6.9	0	2.0	2.0	2.1	1.7	2.1	0	1.0	0	0	8.0	4.9
STOP	0	7.0	0	2.0	2.0	2.1	2.1	2.1	0	4.6	0	0	8.1	5.0

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	5.1	5.0	5.2	0	0	0	0.2	0.2	0.5	5.0	0.3	10.5	9.2	11.4
PLAY	4.9	4.8	5.0	0	5.3	0	0	0	0.5	4.8	10.8	0	0.3	11.5
STOP	5.0	4.9	5.0	0	0	0	0	0	0.5	0	10.8	0	0.3	11.4

	29	30	31	32
MODE				
REC	10.7	10.6	10.0	0
PLAY	10.3	10.2	9.4	0
STOP	10.4	10.3	9.5	0

	Q401			Q404		
	E	B	C	E	B	C
MODE						
REC	0.1	0	9.1	0.1	0.7	0.1
PLAY	0.1	0.3	0.3	0.1	0.7	0.1
STOP	0.1	0.3	0.4	0.1	0.7	0.1

UHF/VHF TUNER/TV DEMODULATOR SCHEMATIC DIAGRAM (IFE4) PM02



E701 (IF)

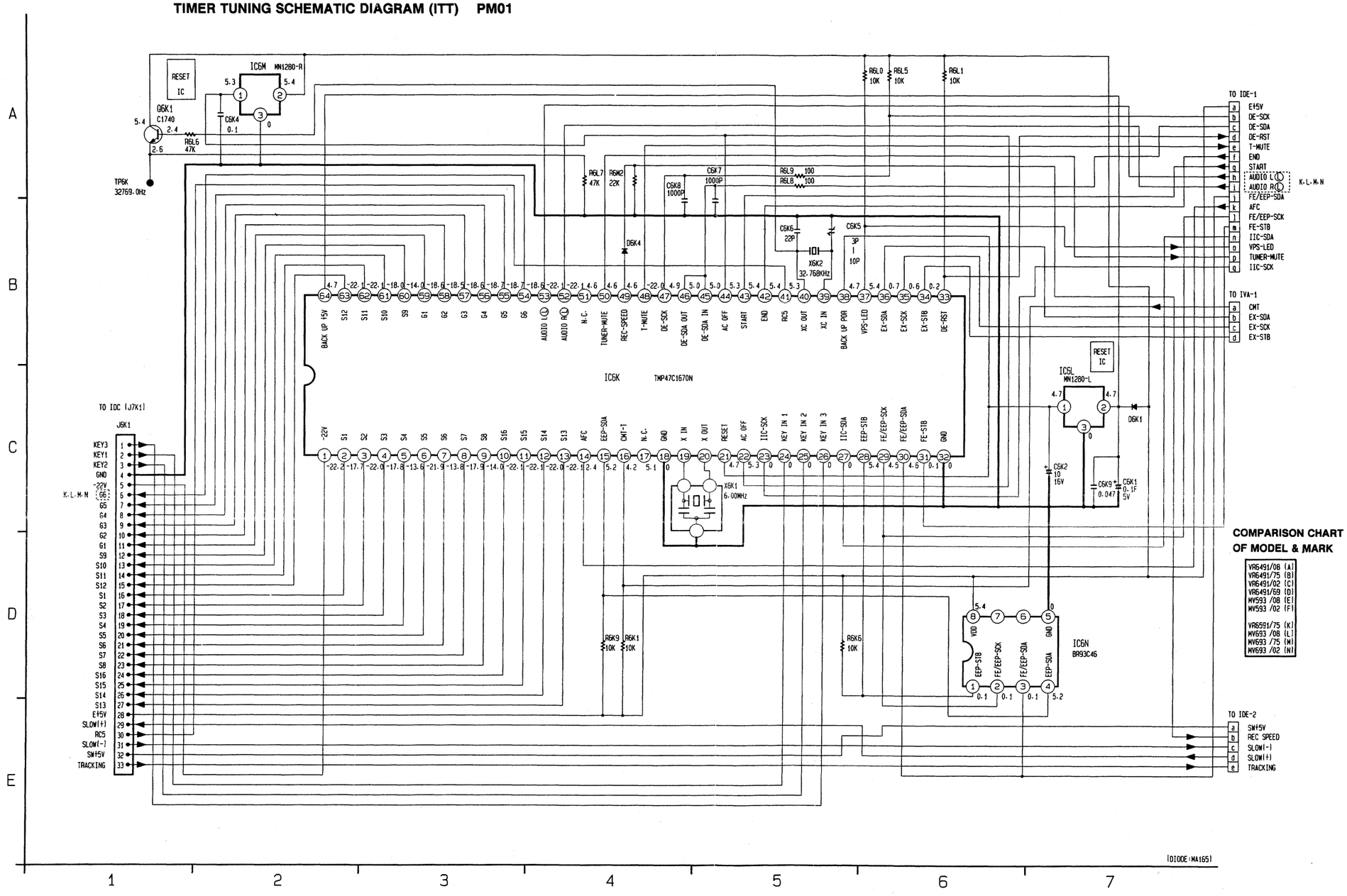
	1	2	3	4	5	6	7	8	9
MODE									
REC	0.1	0.1	8.4	0	3.6	6.0	0	3.5	5.7
PLAY	0.1	0.1	8.4	0	3.6	6.0	0	3.5	5.7
STOP	0.1	0.1	8.4	0	3.6	6.0	0	3.5	5.7

	Q701			Q702		
	E	B	C	E	B	C
MODE						
REC	8.5	9.1	11.5	0	0.7	0
PLAY	8.5	9.1	11.5	0	0.7	0
STOP	8.5	9.1	11.5	0	0.7	0

E701 (TUNER)

	2	4	7	9	10	11	12	13	14	15
MODE										
REC		6.0	11.4	0.1	34.5	5.3		4.6	4.6	0.2
PLAY		6.0	11.4	0.1	34.5	5.3		4.6	4.6	0.2
STOP		6.0	11.4	0.1	34.5	5.3		4.6	4.6	0.2

TIMER TUNING SCHEMATIC DIAGRAM (ITT) PM01



COMPARISON CHART OF MODEL & MARK

VR6491/08 (A)
VR6491/75 (B)
VR6491/02 (C)
VR6491/69 (D)
MV593 /08 (E)
MV593 /02 (F)
VR6591/75 (K)
MV693 /08 (L)
MV693 /75 (M)
MV693 /02 (N)

Q6K1 A1

IC6K C4
IC6L C7
IC6M A2
IC6N D7

D6K1 C7
D6K4 B4

TESTPOINT
TP6K A1

IC6K

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	-22.2	-17.7	-22.0	-17.8	-13.6	-21.9	-13.8	-17.9	-14.0	-22.1	-22.1	-22.0	-22.1	2.4
PLAY		0	5.4	0.4	0		2.5	3.2	3.5	3.2	3.5	0	5.4	5.4
STOP	5.1	0	5.4	0.5	0	4.7	2.5	3.2	3.5	3.2	3.5	0	5.4	5.4

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	5.2	4.2	5.1	0			4.7	5.3	0	0	0	0	0	5.4
PLAY	5.2	4.2	5.1	0			4.7	5.3	0	0	0	0	0	5.4
STOP	5.2	4.2	5.1	0			4.7	5.3	0.2	0	0	0	0.2	5.4

	29	30	31	32	33	34	35	36	37	38	39	40	41	42
MODE														
REC	4.5	4.6	0.1	0	5.3	0.2	0.6	0.7	5.4	4.7			5.3	5.4
PLAY	4.5	4.5	0.1	0	5.3	0.2	0.6	0.5	5.4	4.7			5.3	5.4
STOP	0	4.6	0.1	0	5.3	0.2	0.8	0.8	5.4	4.7			5.3	4.3

IC6K

	43	44	45	46	47	48	49	50	51	52	53	54	55	56
MODE														
REC	5.4	5.3	5.0	5.0	4.9	-22.0	4.6	4.6	4.6	-22.1	-22.1	-18.6	-18.7	-18.7
PLAY	5.4	5.3	4.9	4.9	4.9	-22.0	4.6	4.6	4.6	-22.1	-22.1	-18.7	-18.8	-18.7
STOP	4.5	5.3	4.9	4.9	4.9	-22.1	4.6	4.6	4.6	-22.3	-22.3	-18.6	-18.6	-18.6

	57	58	59	60	61	62	63	64
MODE								
REC	-18.6	-18.5	-18.6	-14.0	-18.0	-22.1	-22.1	4.7
PLAY	-18.6	-18.6	-18.6	-14.0	-18.0	-22.2	-22.2	4.7
STOP	-18.6	-18.6	-18.6	-14.0	-22.4	-22.4	-22.3	4.7

IC6N

	1	2	3	4	5	6	7	8
MODE								
REC	0.1	0.1	0.1	5.2	0	0	0	5.4
PLAY	0.1	0.1	0.1	5.2	0	0	0	5.4
STOP	0.1	0.1	0.1	5.2	0	0	0	5.4

IC6L

	1	2	3
MODE			
REC	5.3	5.4	0
PLAY	5.3	5.4	0
STOP	5.3	5.4	0

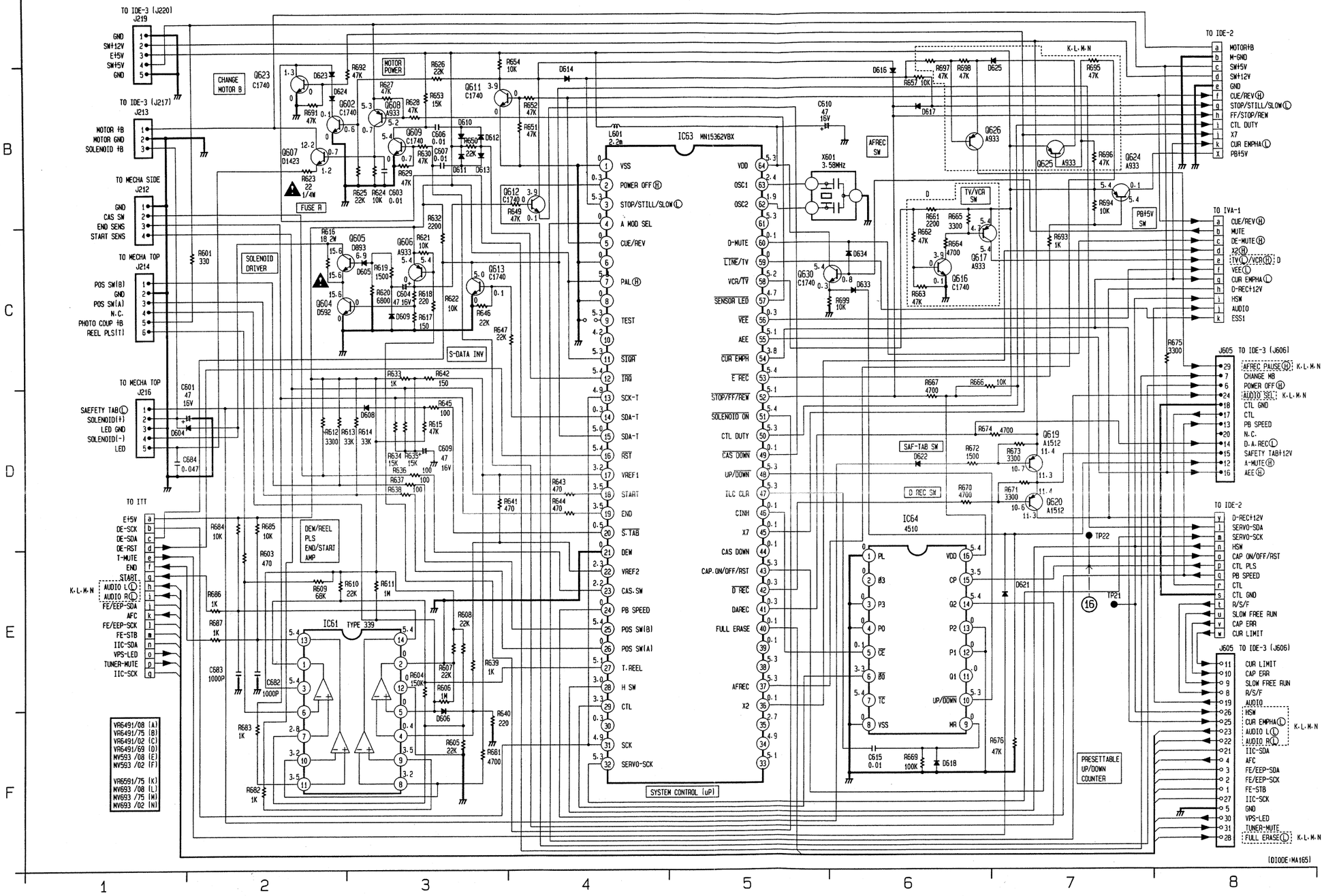
IC6M

	1	2	3
MODE			
REC	4.7	4.7	0
PLAY	4.7	4.7	0
STOP	4.7	4.7	0

Q6K1

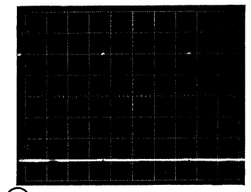
	E	B	C
MODE			
REC	2.6	2.4	5.4
PLAY	2.6	2.4	5.4
STOP	2.6	2.4	5.4

LOGIC SCHEMATIC DIAGRAM (IDE-1) PM01



Q		D	
Q602	B2	D604	D1
Q604	C2	D605	C3
Q605	C3	D606	F3
Q606	C3	D608	D3
Q607	B2	D609	E2
Q608	B3	D610	B3
Q609	B3	D611	B3
Q611	B3	D612	B3
Q612	B4	D613	B3
Q613	C3	D614	B4
Q616	C6	D616	B6
Q617	C6	D617	B6
Q619	D7	D618	F6
Q620	D7	D621	E7
Q623	B2	D622	D6
Q624	B7	D623	B2
Q625	B7	D624	B2
Q626	B6	D625	B7
Q630	C5	D633	C6
		D634	C6

IC		TESTPOINTS	
IC61	E2	TP21	E7
IC63	B5	TP22	D7
IC64	D6		



(16) TP22 1V/Div PB SP 10mSec/Div

IC61

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC		0	5.4	0.4	0		2.8	3.2	3.5	3.2	3.5	0	5.4	5.4
PLAY		0	5.4	0.4	0		2.5	3.2	3.5	3.2	3.5	0	5.4	5.4
STOP	5.1	0	5.4	0.5	0	4.7	2.5	3.2	3.5	3.2	3.5	0	5.4	5.4

IC63

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0	0.3	5.3	0	0	0	5.3	0	5.3	4.2	5.3	5.4	4.9	0.3
PLAY	0	0.3	5.3	0	0	0	5.3	0	5.3	4.1	5.3	5.4	4.9	0.4
STOP	0	0.3	0.1	0	0	0	5.3	0	5.3	4.2	5.3	5.3	4.9	0.4

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	5.0	5.4	3.2	3.5	3.5	0.5	0	2.3	2.2	0	5.4	0	5.1	3.0
PLAY	4.9	5.4	3.2	3.5	0	0.5	0	2.3	2.2	0	5.4	0	5.1	3.0
STOP	4.9	5.4	3.2	3.5	3.5	0.5	0	2.3	2.2	0	2.2	5.4	0.1	0

	29	30	31	32	33	34	35	36	37	38	39	40	41	42
MODE														
REC	3.3	0.3	4.9	5.3	5.1	4.9	2.7	0.1	5.3	5.3	0.1	0.1	0.3	0.3
PLAY	2.2	0.2	4.9	5.3	5.1	4.9	2.7	0	5.3	5.3	0.2	0.2	10.8	11.4
STOP	0	0.4	4.9	5.2	5.1	4.9	2.6	0	5.3	5.3	0.3	0.3	10.8	11.4

	43	44	45	46	47	48	49	50	51	52	53	54	55	56
MODE														
REC	5.3	0.1	0.1	0.1	5.3	5.3	0.1	5.3	5.4	5.1	5.4	4.8	5.1	0.3
PLAY	5.3	0	0.1	0	5.3	5.3	0	5.3	5.4	5.1	0.4	3.7	0.2	4.6
STOP	2.2	0	0.1	5.3	5.3	0	0	5.3	5.4	0.2	0.4	0.1	5.1	0.3

	57	58	59	60	61	62	63	64
MODE								
REC	4.7	5.2	0	0.1	5.3	1.9	2.4	5.3
PLAY	4.7	5.2	0	0.2	5.3	1.9	2.4	5.3
STOP	4.6	5.2	0	0.2	5.3	1.9	2.4	5.3

IC64

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0	0	0	0	0.1	3.3	5.4	0	0	5.3	0	0	0	5.4
PLAY	0	0	0	0	0	3.3	3.3	0	0	5.3	0	0	0	5.4
STOP	0	0	0	0	5.3	5.4	5.4	0	0	0	0	0	0	5.4

	1	2
MODE		
REC	3.5	5.4
PLAY	0.4	5.4
STOP	0.7	5.4

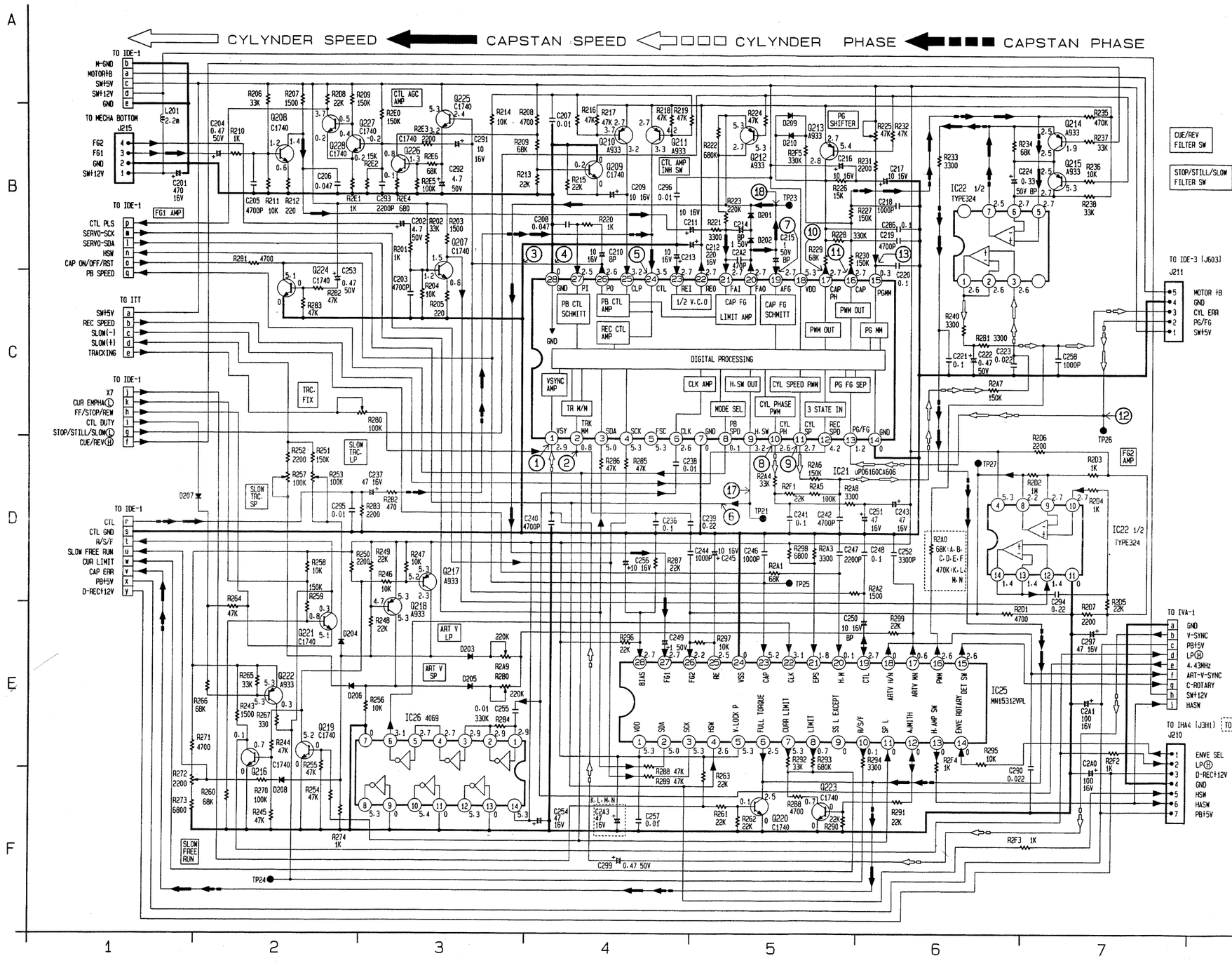
	Q602			Q604			Q605			Q606			Q607		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	0	0.6	0.1	0	0	15.6	15.6	6.9	15.6	5.4	5.4	0	1.2	0.7	12.2
PLAY	0	0.6	0.1	0	0	15.6	15.6	6.9	15.6	5.4	5.4	0	1.2	0.7	12.2
STOP	0	0.3	4.2	0	0	16.0	16.0	7.3	16.0	5.4	5.4	0	1.1	0.7	13.0

	Q608			Q609			Q611			Q612			Q613		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	5.3	5.2	0.7	0	0.7	5.4	0	0	3.9	0.1	0	3.9	0	0.1	5.0
PLAY	5.3	5.2	0.7	0	0	5.4	0	0	3.9	0	0	3.9	0	0.1	5.0
STOP	5.3	5.3	0.7	0	0	5.4	0	0	0.6	0.2	0	0.6	0	0.1	5.0

	Q616			Q617			Q619			Q620			Q623		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	0.1	0	3.9	5.4	4.7	5.4	11.4	10.7	11.3	11.4	10.6	11.3	0	0	1.3
PLAY	0	0.6	0.1	5.4	4.7	5.4	11.4	10.7	11.4	11.4	11.4	0.4	0	0.1	1.4
STOP	0.1	0	0.6	5.4	4.7	5.4	11.4	10.7	11.4	11.4	11.4	0.5	0	0.1	1.4

	Q624			Q630		
	E	B	C	E	B	C
MODE						
REC	5.4	5.4	0.1	0.3	0.8	5.4
PLAY	5.4	4.6	5.3	0.3	0.8	5.4
STOP	5.4	4.6	5.3	0.3	0.8	5.4

SERVO SCHEMATIC DIAGRAM (IDE-2) PM01



Q

Q207	B3
Q208	B2
Q209	B4
Q210	B4
Q211	B4
Q212	B5
Q213	B5
Q214	B7
Q215	B7
Q216	E2
Q217	D3
Q218	E3
Q219	E2
Q220	F5
Q221	E2
Q222	E2
Q223	F5
Q224	C2
Q225	A3
Q226	B3
Q227	B2
Q228	B2

IC

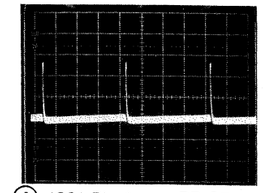
IC21	D5
IC22	B6
IC22	D7
IC25	E6
IC26	E3

D

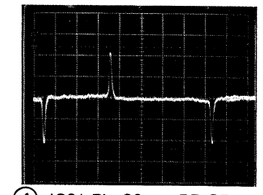
D201	B5
D202	B5
D203	E3
D204	E2
D205	E3
D206	E2
D207	D2
D208	F2
D209	B5
D210	B5

TESTPOINTS

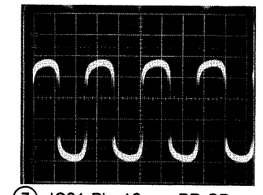
TP21	D5
TP23	B5
TP24	F2
TP25	D5
TP26	D7
TP27	D6



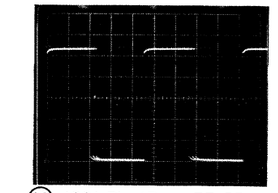
① IC21 Pin 1 PB SP
50mV/Div 5mSec/Div



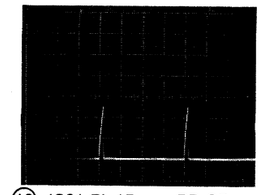
④ IC21 Pin 26 PB SP
50mV/Div 5mSec/Div



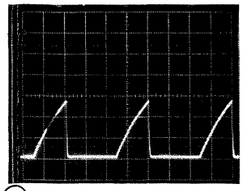
⑦ IC21 Pin 19 PB SP
20mV/Div 0,5mSec/Div



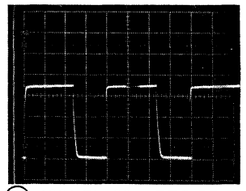
⑩ IC21 Pin 17 PB SP
1V/Div 0,1mSec/Div



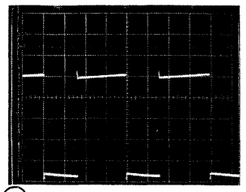
⑬ IC21 Pin15 PB SP
1V/Div 5mSec/Div



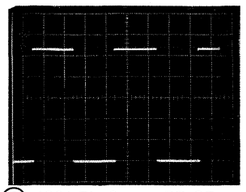
(2) IC21 Pin 2 REC SP
1V/Div 10mSec/Div



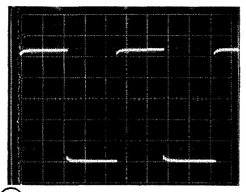
(3) IC21 Pin 26 REC SP
1V/Div 10mSec/Div



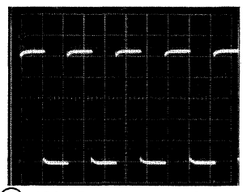
(5) IC21 Pin 24 REC SP
1V/Div 10mSec/Div



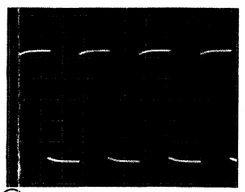
(6) IC21 Pin 9 PB SP
1V/Div 10mSec/Div



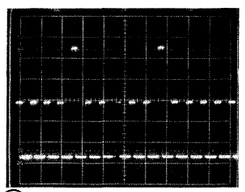
(8) IC21 Pin 10 PB SP
1V/Div 50µSec/Div



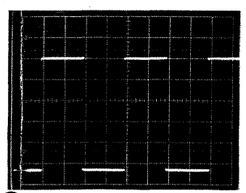
(9) IC21 Pin 11 PB SP
1V/Div 0,1mSec/Div



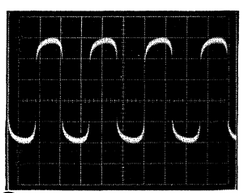
(11) IC21 Pin 16 PB SP
1V/Div 20µSec/Div



(12) IC21 Pin 13 PB SP
1V/Div 10mSec/Div



(17) TP21 PB SP
1V/Div 10mSec/Div



(18) TP23 PB SP
20mV/Div 0,5mSec/Div

IC21

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	2.9	0.8	5.0	5.3	5.3	2.6	0	0	3.2	2.6	2.7	4.2	1.2	0
PLAY	2.9	0.8	4.9	5.2	5.3	2.6	0	0	3.2	2.6	2.7	4.1	1.2	0
STOP	2.9	0.9	4.9	5.2	5.3	2.6	0	0	0	2.7	5.3	4.1	5.3	0

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	0.3	2.7	2.7	5.3	2.7	2.7	2.7	2.7	2.7	3.5	3.2	2.6	2.5	0
PLAY	0.3	2.7	2.7	5.3	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.2	2.9	0
STOP	0.2	4.9	2.3	5.3	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.5	2.5	0

IC22

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	2.6	2.6	2.6	5.3	2.7	2.7	2.5	2.2	2.7	2.7	0	1.4	1.4	1.4
PLAY	2.6	2.6	2.6	5.3	2.7	2.7	2.5	2.2	2.7	2.7	0	1.4	1.4	1.4
STOP	4.1	3.4	3.9	5.3	2.0	2.0	2.0	0.8	2.7	2.7	0	1.4	1.4	1.4

IC25

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	5.3	5.0	5.3	2.6	5.3	2.5	5.3	0.7	0	0.1	0	0	0	0
PLAY	5.3	4.9	5.3	2.6	5.3	2.5	5.3	0.7	0	0.1	0	0	0	5.0
STOP	5.3	5.0	5.2	5.3	5.3	2.6	5.3	2.4	0.2	2.5	0	1.9	2.2	0.1

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	2.6	2.6	0.6	0	2.7	0.1	1.8	3.1	5.2	0	2.5	2.2	2.7	2.7
PLAY	2.6	2.6	0.6	0	2.6	0.1	1.8	3.1	5.1	0	2.5	2.2	2.7	2.7
STOP	0.7	4.1	0.6	0	2.6	0.1	1.8	3.2	2.2	0	2.4	0.8	2.7	2.7

IC26

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	2.9	2.9	2.9	2.7	2.7	3.1	0	5.3	0	5.4	0	5.3	0	5.3
PLAY	2.9	2.9	2.9	2.7	2.7	3.1	0	5.3	0	5.3	0	5.3	0	5.3
STOP	2.9	2.9	2.9	2.7	2.7	3.1	0	5.3	0	5.3	0	5.3	0	5.3

	Q207			Q208			Q209			Q210			Q211		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	0.6	1.2	1.5	0.6	1.2	1.4	0	0.2	0	2.7	3.7	3.2	2.7	4.2	3.3
PLAY	0.6	1.2	1.5	0.6	1.2	1.4	0	0.6	0	2.7	3.7	2.7	2.7	3.7	2.7
STOP	0.6	1.2	1.5	0.6	1.2	1.4	0	0.6	0	2.7	2.5	2.7	2.7	2.5	2.7

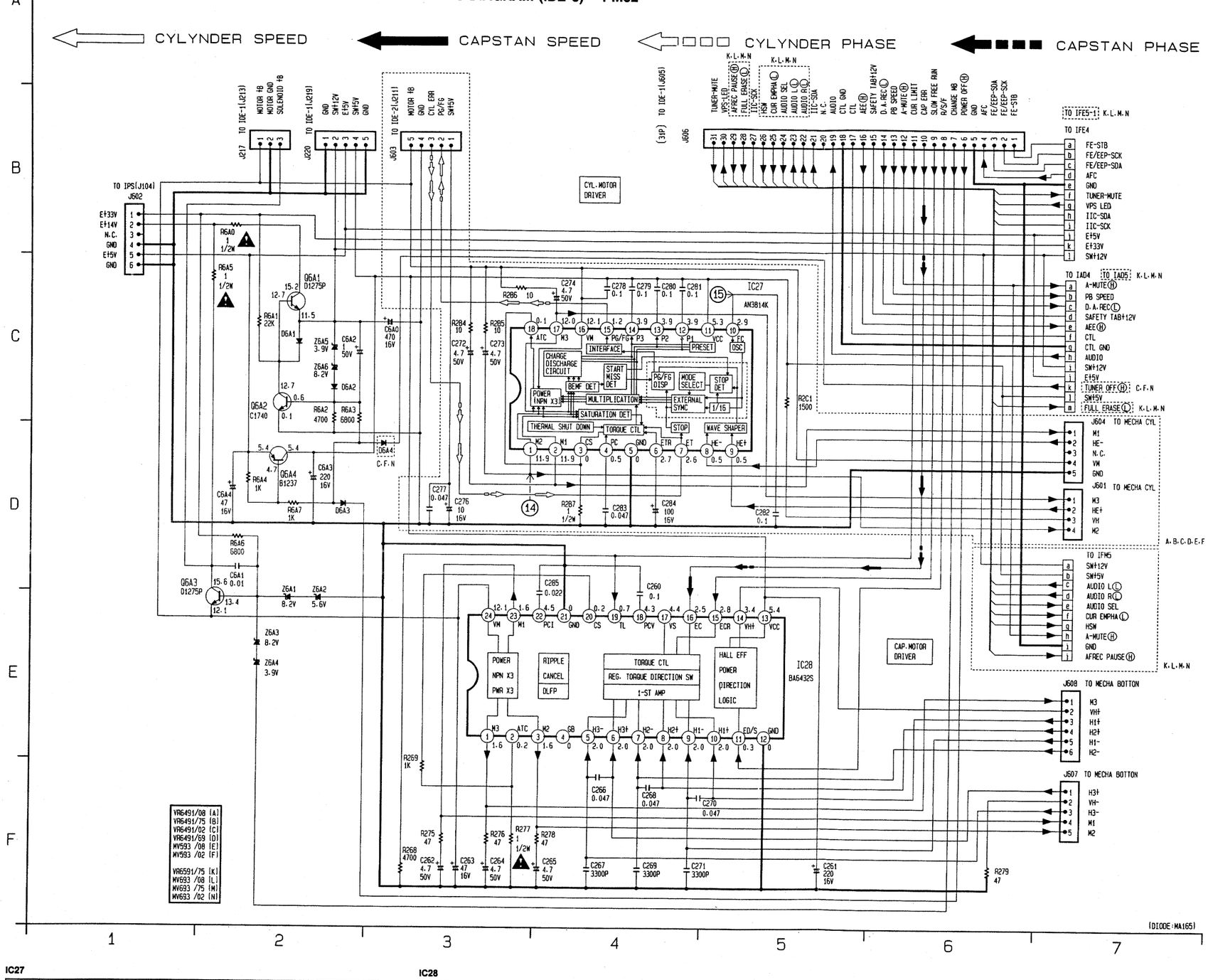
	Q212			Q213			Q214			Q215			Q216		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	2.7	5.3	2.7	2.7	5.3	2.8	2.5	1.9	2.5	2.5	5.3	2.7	0	0.7	0.1
PLAY	2.7	5.3	2.7	2.7	5.3	2.7	2.5	1.9	2.5	2.5	5.3	2.7	0	0.7	0.1
STOP	2.7	2.1	2.7	2.7	2.1	2.7	2.1	1.5	2.0	2.1	1.5	2.0	0	0.7	0.1

	Q217			Q218			Q219			Q220			Q221		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	5.3	5.2	2.3	5.3	4.7	5.3	0	0	5.2	0	0.1	2.5	5.1	0.8	0.3
PLAY	5.3	5.2	2.3	5.3	4.7	5.3	0	0	5.1	0	0.1	2.5	5.1	0.8	0.3
STOP	5.3	5.3	2.4	5.3	4.7	5.3	0	0	5.2	0	0.1	2.1	0.2	0	2.5

	Q222			Q223			Q224			Q225			Q226		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	5.3	5.3	0.3	0	0	0.7	0	0	5.1	3.2	2.4	5.3	0.1	1.3	0.8
PLAY	5.3	5.3	0.3	0	0	0.7	0	0	5.1	0.8	1.2	5.3	0	0.5	5.0
STOP	5.3	5.2	2.5	0	0.2	0.5	0	0	2.2	1.6	0.3	5.3	0.3	0.9	3.1

	Q227			Q228		
	E	B	C	E	B	C
MODE						
REC	0.2	-0.2	0.4	0.2	0.5	3.7
PLAY	0.3	0.5	0.9	0.3	0.8	0.5
STOP	0.3	0.5	0.9	0.3	0.8	0.7

DRIVER SCHEMATIC DIAGRAM (IDE-3) PM02



IC27

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	11.9	11.9	0	0.5	0	2.7	2.6	0.5	0.5	2.9	5.3	3.9	3.9	3.9
PLAY	11.9	11.9	0.1	0.6	0	2.7	2.6	0.5	0.5	2.9	5.3	3.9	3.9	3.9
STOP	12.8	12.8	0	0	0	2.7	4.1	0.6	0.5	1.4	5.3	4.5	4.5	4.1

	15	16	17	18
MODE				
REC	1.2	12.1	12.0	0.1
PLAY	1.2	12.1	11.9	0.1
STOP	5.3	12.8	12.8	0

IC28

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	1.6	0.2	1.6	0	2.0	2.0	2.0	2.0	2.0	2.0	0.3	0	5.4	3.4
PLAY	1.6	0.2	1.7	0	2.0	2.0	2.0	2.1	2.1	2.1	0.3	0	5.3	3.4
STOP	2.2	0	2.1	0	0	0	0	0	0	0	0.9	0	5.3	3.3

	15	16	17	18	19	20	21	22	23	24
MODE										
REC	2.8	2.5	4.4	4.3	0.7	0.2	0	4.5	1.6	12.1
PLAY	2.8	2.5	4.4	4.3	0.7	0.2	0	4.5	1.7	12.1
STOP	2.8	2.4	0	4.3	0.6	0	0	3.1	1.9	12.6

	Q6A1			Q6A2			Q6A3			Q6A4		
	E	B	C	E	B	C	E	B	C	E	B	C
MODE												
REC	11.5	12.7	15.2	0.1	0.6	12.7	12.1	13.4	15.6	5.4	4.7	5.4
PLAY	11.5	12.7	15.3	0.1	0.6	12.7	12.1	13.4	15.6	5.4	4.7	5.3
STOP	11.5	12.7	15.5	0.1	0.6	12.7	12.8	14.0	16.0	5.4	4.7	5.3

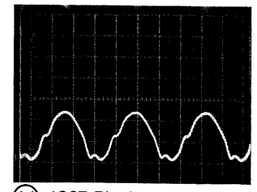
Q6A1 C2
Q6A2 C2
Q6A3 D1
Q6A4 D2

IC27 C5
IC28 E5

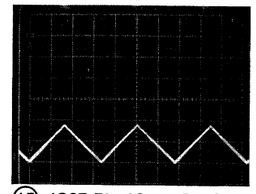
D6A1 C2
D6A2 C2
D6A3 D2
D6A4 D3

ZENERS

Z6A1 E2
Z6A2 E2
Z6A3 E2
Z6A4 E2
Z6A5 C2
Z6A6 C2

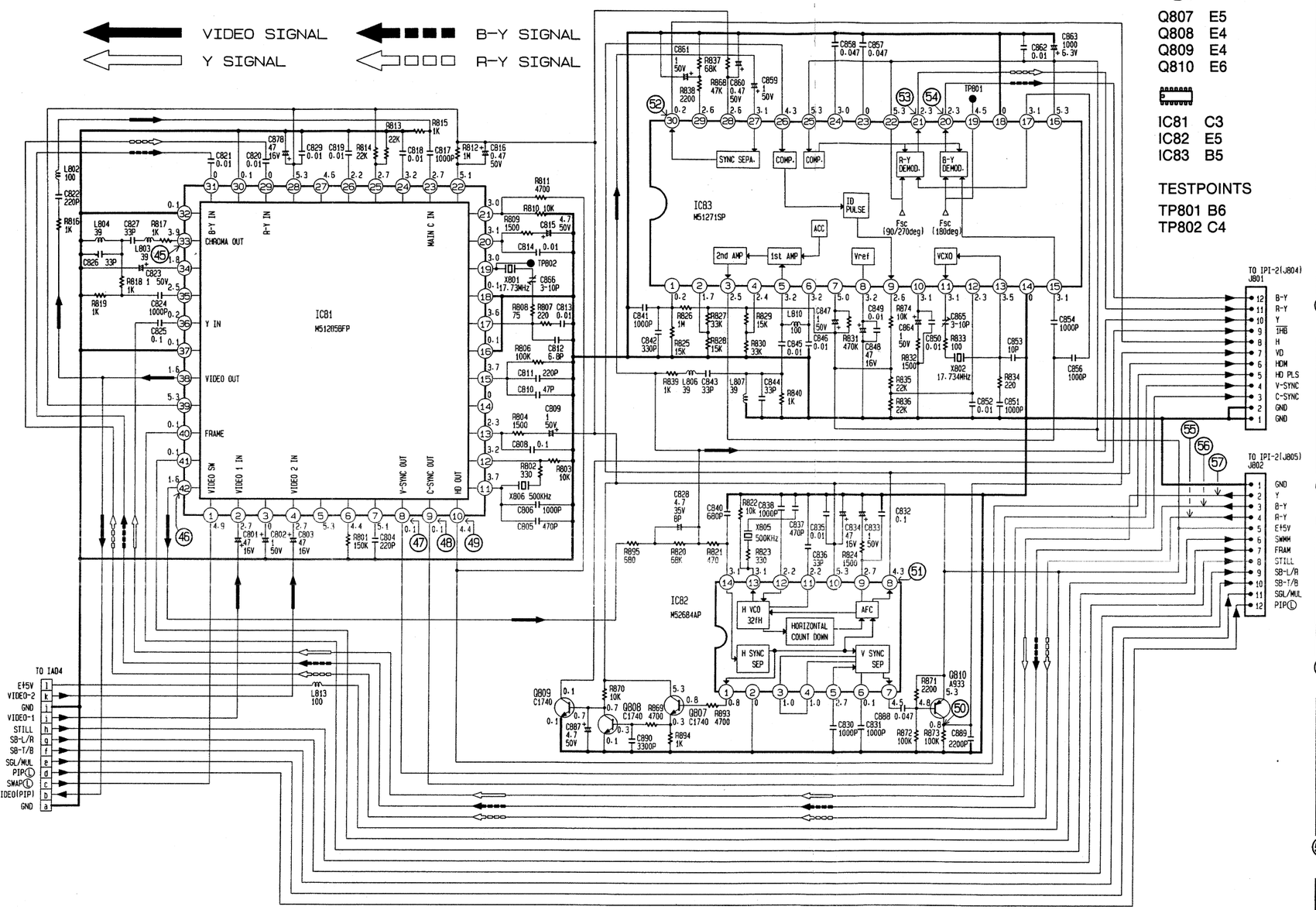


(14) IC27 Pin 1 PB SP
5V/Div 2mSec/Div



(15) IC27 Pin 10 PB SP
50mV/Div 2mSec/Div

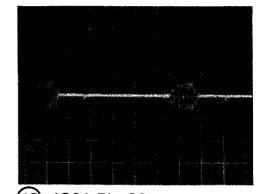
PIP ANALOG SCHEMATIC DIAGRAM (IPI-1) PM02

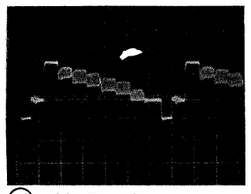


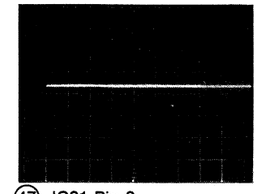
Q807 E5
Q808 E4
Q809 E4
Q810 E6

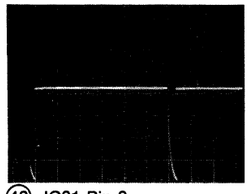
IC81 C3
IC82 E5
IC83 B5

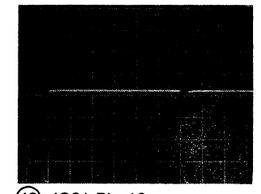
TESTPOINTS
TP801 B6
TP802 C4


(45) IC81 Pin 33
500mV/Div 10µSec/Div

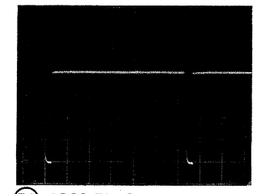

(46) IC81 Pin 42
1V/Div 10µSec/Div

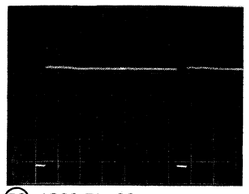

(47) IC81 Pin 8
1V/Div 5mSec/Div

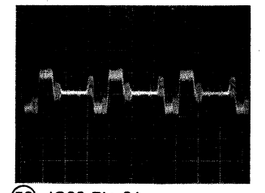

(48) IC81 Pin 9
1V/Div 10µSec/Div

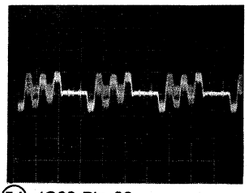

(49) IC81 Pin 10
1V/Div 10µSec/Div

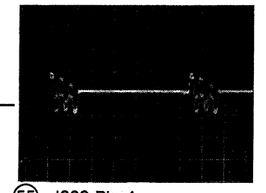
(50) Q810 Collector
1V/Div 5mSec/Div

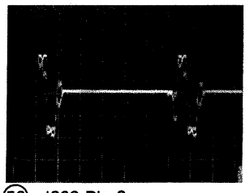

(51) IC82 Pin 8
1V/Div 10µSec/Div

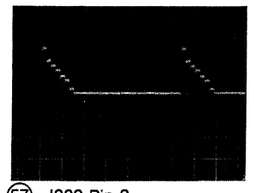

(52) IC83 Pin 30
1V/Div 10µSec/Div


(53) IC83 Pin 21
1V/Div 20µSec/Div


(54) IC83 Pin 20
1V/Div 20µSec/Div


(55) J802 Pin 4
200mV/Div 10µSec/Div


(56) J802 Pin 3
200mV/Div 10µSec/Div


(57) J802 Pin 2
200mV/Div 10µSec/Div

IC81

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	4.9	2.7	0	2.7	5.3	4.4	5.1	0.1	0.1	4.4	3.7	3.2	2.3	0
PLAY	0	2.7	0	2.9	5.3	4.4	0.1	4.6	4.6	4.4	3.7	3.0	2.7	0
STOP	4.9	2.7	0	2.7	5.3	4.4	5.1	0.1	0.1	4.4	3.8	3.2	2.3	0

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	3.7	0.1	3.6	0.1	3.0	3.1	3.0	5.1	2.7	3.2	2.7	2.2	4.6	5.3
PLAY	2.5	0.1	3.5	0.1	3.0	3.1	3.0	5.1	2.7	3.2	2.7	2.1	4.6	5.3
STOP	3.7	0.1	3.6	0.1	3.0	3.1	3.0	5.1	2.7	3.2	2.7	2.1	4.6	5.3

	29	30	31	32	33	34	35	36	37	38	39	40	41	42
MODE														
REC	0	0.1	0	0.1	3.9	1.8	2.5	0.2	0.1	1.6	5.3	0.1	0.1	1.6
PLAY	0	0.1	0	0.1	3.9	1.8	2.6	0.2	0.1	2.2	5.3	0.1	0.1	1.6
STOP	0	0.1	0	0.1	3.9	1.8	2.5	0.2	0.1	1.5	5.3	0.1	0.1	1.6

IC82

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0.8	0	1.0	1.0	2.7	0.1	4.5	4.3	2.7	5.3	2.2	2.2	3.1	3.1
PLAY	0.8	0	1.0	1.0	2.6	0	4.5	4.3	2.7	5.3	2.2	2.2	3.1	3.1
STOP	0.8	0	0	1.0	2.7	0.1	4.5	4.3	2.7	5.3	2.2	2.2	3.1	3.1

IC83

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0.2	1.7	2.5	2.4	3.2	3.2	5.0	3.2	2.6	3.1	3.1	2.3	3.5	0
PLAY	0.2	1.7	2.5	2.4	3.2	3.2	5.0	3.2	2.6	3.1	3.1	2.3	3.5	0
STOP	0.2	1.7	2.5	3.4	3.2	3.2	5.0	3.2	2.6	3.1	3.1	2.3	3.5	0

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	3.1	5.3	3.1	0	4.5	2.3	2.3	5.3	0	3.0	5.3	4.3	3.1	2.6
PLAY	3.1	5.3	3.1	0	4.5	2.2	2.2	5.3	0	3.0	0	4.3	3.1	0
STOP	3.1	5.3	3.1	0	4.5	2.3	2.3	0	0	3.0	5.3	4.3	3.1	2.6

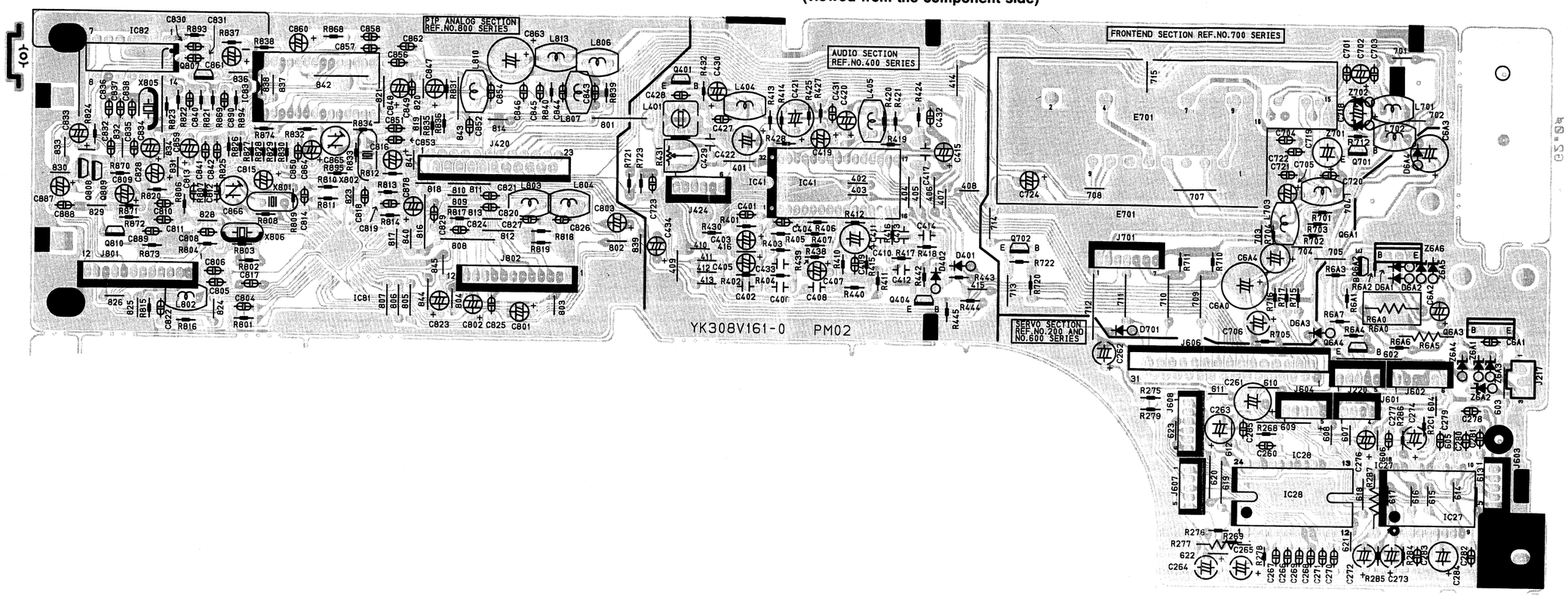
IC83

	29	30
MODE		
REC	2.6	0.2
PLAY	2.6	0.2
STOP	2.6	0.2

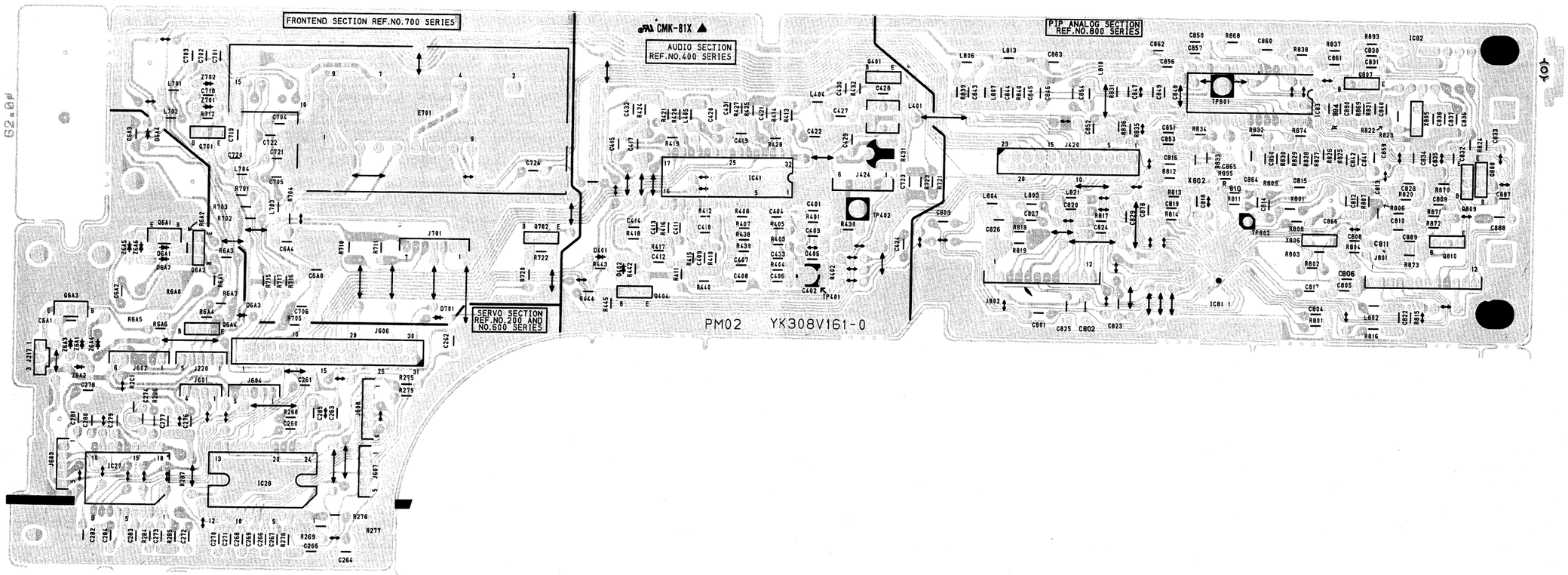
	Q807			Q808			Q809			Q810		
	E	B	C	E	B	C	E	B	C	E	B	C
MODE												
REC	0.3	0.8	5.3	0.1	0.3	0.7	0.1	0.7	0.1	5.3	4.8	0.8
PLAY	0.3	0.8	0	0.1	0.3	0.7	0.1	0.7	0.1	5.3	4.7	0.8
STOP	0.3	0.8	5.3	0.1	0.3	0.7	0.1	0.7	0.1	5.3	4.8	0.8

AUDIO/FRONTEND/SERVO (IDE-3)/PIP ANALOG P.C.B. DRAWING PM02

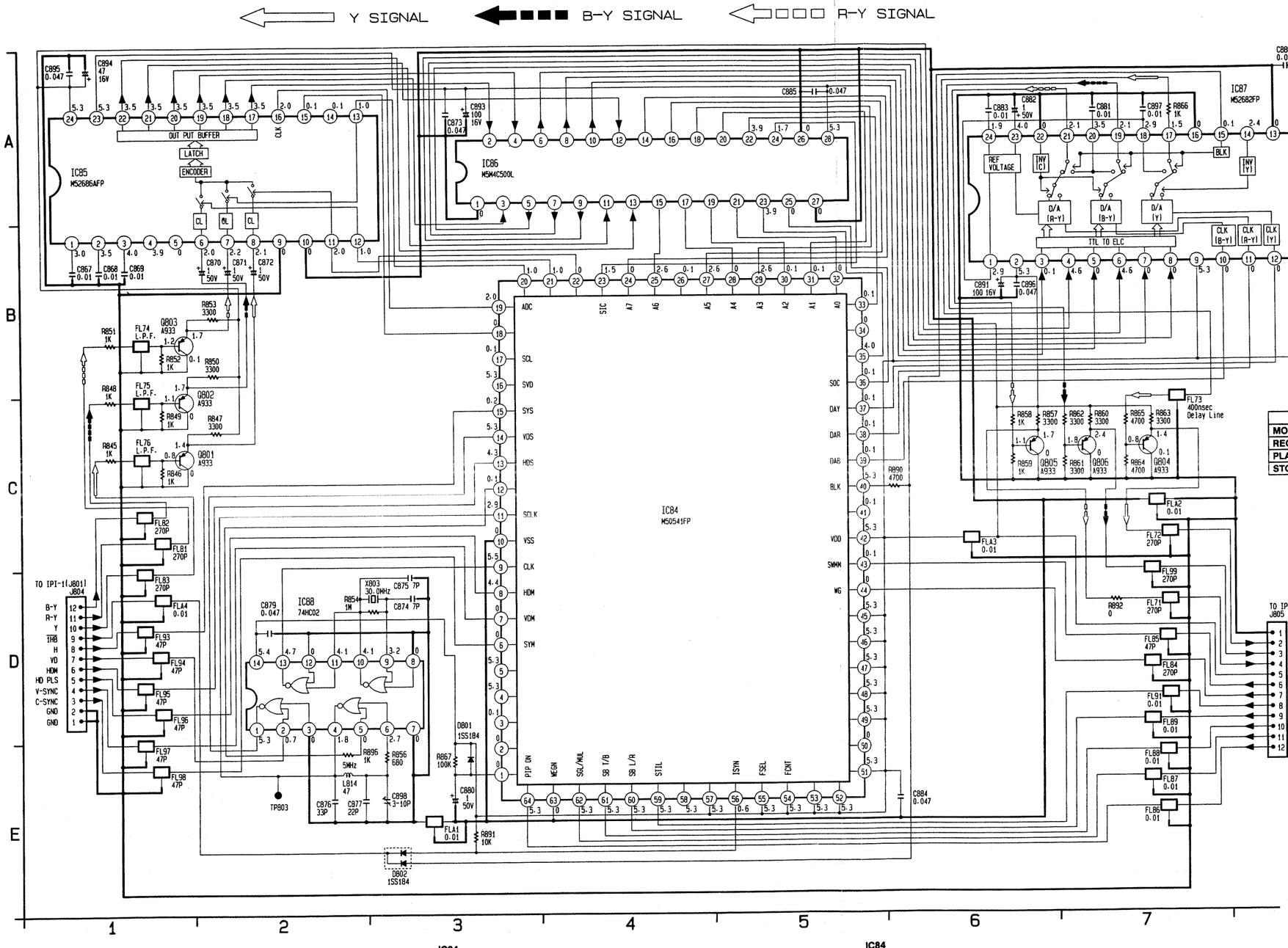
(viewed from the component side)


PIP ANALOG SECTION REF.NO.800 SERIES
AUDIO SECTION REF.NO.400 SERIES
FRONTEND SECTION REF.NO.700 SERIES
SERVO SECTION REF.NO.200 AND NO.600 SERIES
YK308V161-0 PM02

(viewed from the copper side)



PIP DIGITAL SCHEMATIC DIAGRAM (IPI-2) PP01



Q801 C2
Q802 B2
Q803 B1
Q804 C7
Q805 C6
Q806 C7

IC84 C4
IC85 A1
IC86 A3
IC87 A8
IC88 D2

D801 D3
D802 E3

TESTPOINT
TP803 E2

	Q801			Q802			Q803			Q804			Q805		
	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C
MODE															
REC	1.4	0.8	0	1.7	1.1	0	1.7	1.2	0.1	1.4	0.8	0.1	1.7	1.1	0
PLAY	1.4	0.8	0.1	1.7	1.1	0	1.7	1.1	0	1.4	0.8	0.1	1.7	1.1	0.1
STOP	1.4	0.8	0	1.7	1.1	0	1.7	1.1	0	1.4	0.8	0	1.6	1.1	0

Q806

	E	B	C
MODE			
REC	2.4	1.8	0
PLAY	2.4	1.8	0
STOP	2.4	1.8	0

IC85

	15	16	17	18	19	20	21	22	23	24
MODE										
REC	0.1	2.0	3.5	3.5	3.5	3.5	3.5	3.5	5.3	5.3
PLAY	0.1	2.0	1.3	0.2	1.3	3.5	3.5	3.5	5.3	5.3
STOP	0	2.0	3.5	3.5	3.5	3.5	3.5	3.5	5.3	5.3

IC86

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0													
PLAY	0													
STOP	0													

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC								3.9	3.9	1.7	0	0	0	5.3
PLAY								5.1	5.1	1.7	0.2	0	0	5.3
STOP								3.9	3.9	1.7	0	0	0	5.3

IC87

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	2.9	5.3	0.1	4.6	0	4.6	0	0	5.3	0	0	0	0	2.4
PLAY	2.9	5.3	0	0	0	0	0	4.6	5.3	0	0	0	0	0
STOP	2.9	5.3	0	0.1	0	0	0	4.6	5.3	0	0	0	0	2.3

	15	16	17	18	19	20	21	22	23	24
MODE										
REC	0.1	0	1.5	2.9	2.1	3.5	2.1	0	4.0	1.9
PLAY	0	0	1.5	2.9	0	3.5	2.1	0	0	1.9
STOP	0	0	1.5	2.9	2.1	3.5	2.1	0	0	1.9

IC88

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	5.3	0.7	0	1.8	0	2.7	0	0	3.2	4.1	4.1	0	4.7	5.4
PLAY	5.4	0.7	0	2.1	0	2.7	0	0	3.2	4.2	4.2	0	5.1	5.4
STOP	5.3	0.7	0	2.1	0	2.7	0	0	3.2	4.1	4.1	0	5.0	5.4

IC84

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	0	0	0.1	5.3	5.3	0	0	4.4	5.5	0	2.9	0.1	4.3	5.3
PLAY	5.3	0	0.3	5.0	5.3	4.4	4.5	4.4	5.1	0	2.9	0.1	4.3	5.3
STOP	5.3	0	0	5.3	5.3	0	0	4.4	5.1	0	2.9	0.1	4.3	5.3

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MODE														
REC	0.2	5.3	0.1	0	2.0	1.0	1.0	0	1.5	0	2.6	0.1	2.6	0
PLAY	0.2	5.3	0	0	2.0	1.0	1.0	2.0	1.5	0	2.6	0	2.6	0
STOP	0.2	5.3	0	0	2.1	1.0	1.0	2.0	1.5	0	2.6	0.1	2.6	0.1

IC84

	29	30	31	32	33	34	35	36	37	38	39	40	41	42
MODE														
REC	2.6	0.1	0.1	0	0.1	0	4.0	0.1	0.1	0.1	0.1	5.3	0.1	5.3
PLAY	2.6	0	0	0	3.9	0	3.9	0	0	0	0	5.3	0.1	5.3
STOP	2.6	0	0.1	0	3.9	0	4.0	0	0	0	0	5.3	0	0

	43	44	45	46	47	48	49	50	51	52	53	54	55	56
MODE														
REC	0.1	0	5.3	5.3	5.3	5.3	5.3	0	5.3	5.3	5.3	5.3	5.3	0.6
PLAY	0.1	0.1	5.3	5.3	5.3	5.3	5.3	0	5.3	5.3	5.3	5.3	5.3	0.6
STOP	0	0	5.3	5.3	5.3	5.3	5.3	0	5.3	5.3	5.3	5.3	5.3	0.6

IC84

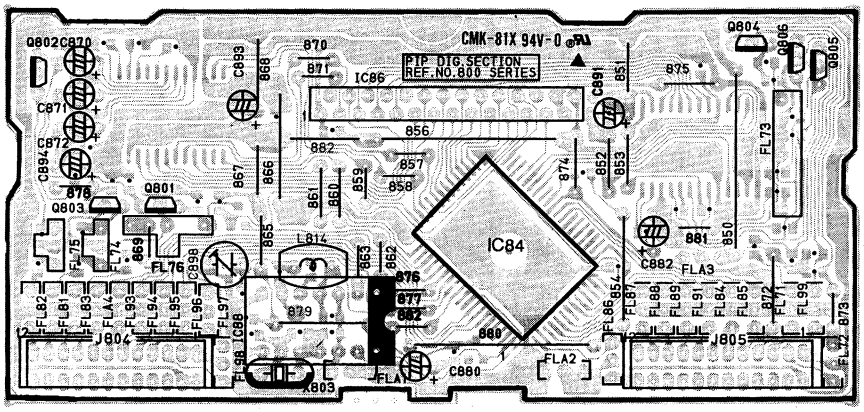
	57	58	59	60	61	62	63	64
MODE								
REC	5.3	5.3	5.3	5.3	5.3	5.3	0	5.3
PLAY	5.3	5.3	5.3	5.3	0	5.3	0	0
STOP	5.3	5.3	5.3	5.3	5.3	5.3	0	0.3

IC85

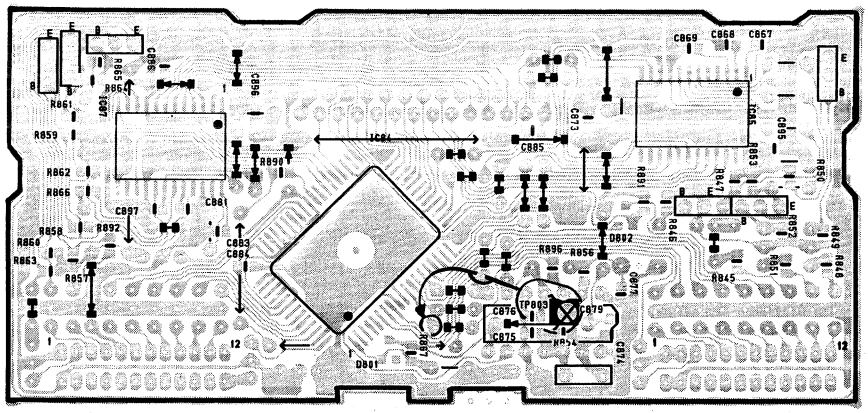
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MODE														
REC	3.0	3.5	4.0	3.9	0	2.0	2.2	2.1	0	0	2.0	1.0	1.0	0.1
PLAY	2.9	3.5	4.0	3.9	3.0	2.0	2.2	2.1	0	0	2.0	1.0	1.0	0
STOP	2.9	3.5	4.0	3.9	2.9	1.9	2.2	2.0	0	0	2.0	1.0	1.0	0

PIP DIGITAL P.C.B. DRAWING PP01

(viewed from the component side)

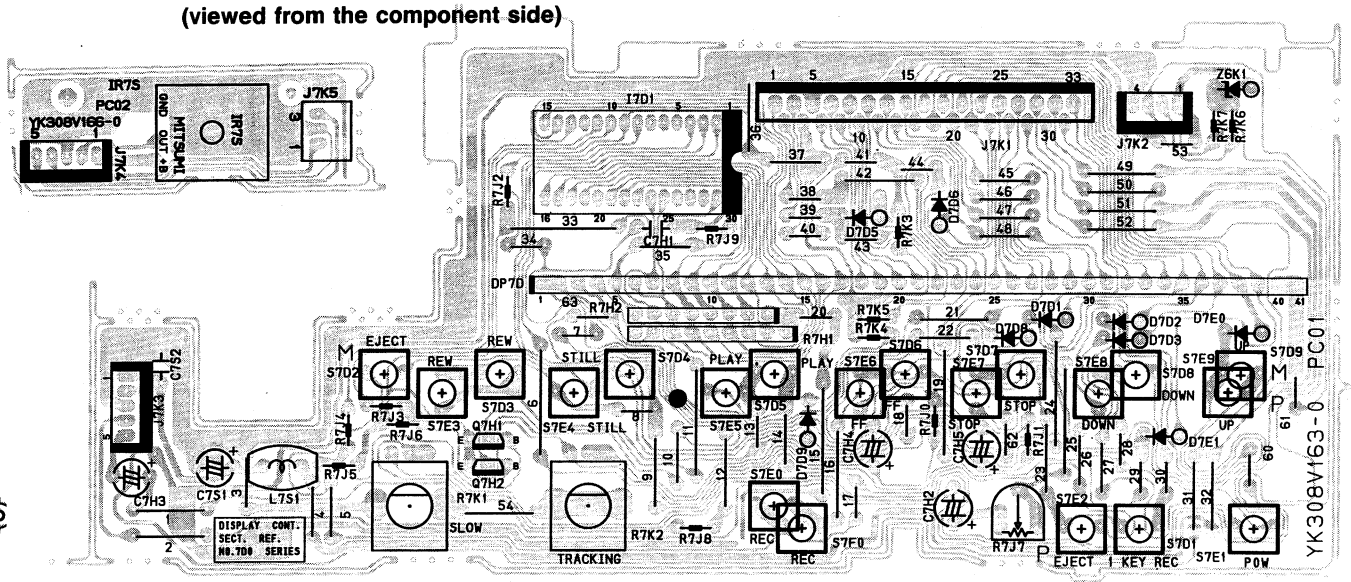


(viewed from the copper side)

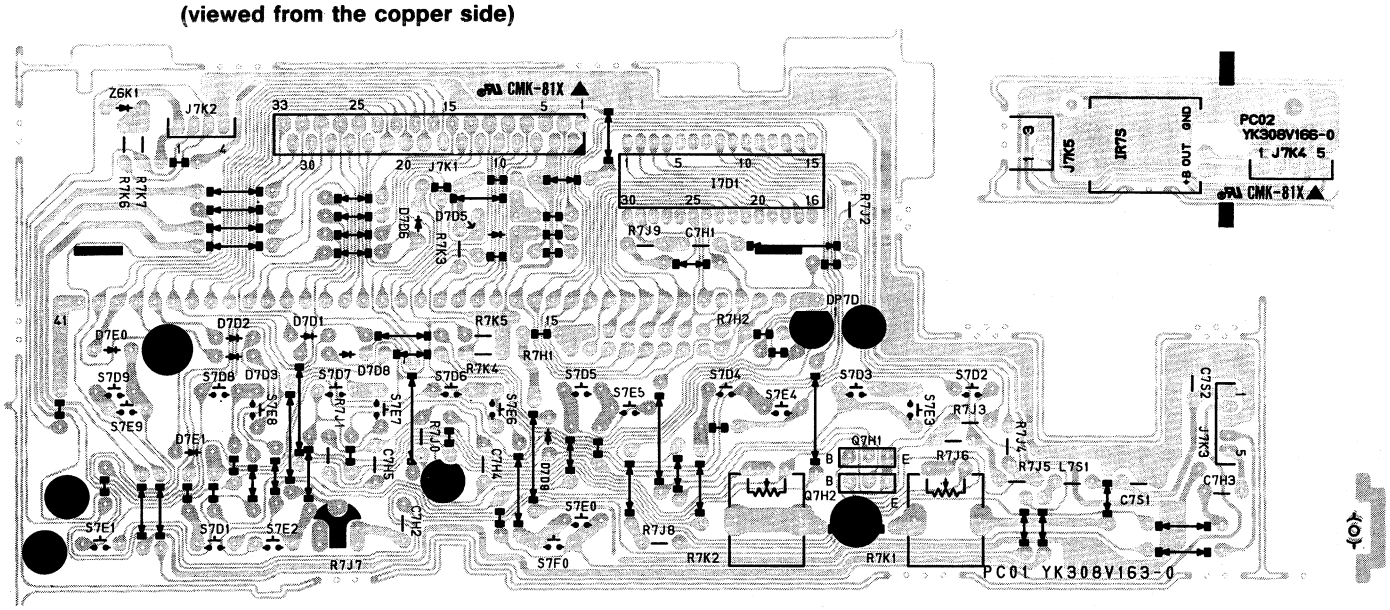


DISPLAY CONTROL P.C.B. DRAWING PC01 PC02

(viewed from the component side)



(viewed from the copper side)



DISPLAY CONTROL SCHEMATIC DIAGRAM (IDC) PC01

DC2 PC02

IR7S
PAS-C615

TO IDC(J7K3)
J7K4

J7K5 TO IFW5(J501)

VR6491/08 (A)
VR6491/75 (B)
VR6491/02 (C)
VR6491/69 (D)
MV593 /08 (E)
MV593 /02 (F)
VR6591/75 (K)
MV693 /08 (L)
MV693 /75 (M)
MV693 /02 (N)

		D7D4	D7D5	D7D6	D7D7	D7D8	D7D9
08	MONO	×	×	×	Jumper	Jumper	Jumper
	STEREO	○	×	×	○	Jumper	Jumper
02	MONO	×	×	○	Jumper	○	Jumper
	STEREO	○	×	○	○	○	Jumper
75	MONO	×	○	×	Jumper	Jumper	○
	STEREO	○	○	×	○	Jumper	○
69	MONO	×	○	○	Jumper	○	○

I7D1 BA6800AS

A-NETWORK 100KX7

A-NETWORK 100KX8

TO IPS(J104)
J7K2

TO ITI(J6K1)
J7K1

DP7D

Q7H1 A933

Q7H2 A933

L7S1 2.2m

(DIODE:MA165)

Q7H1 D1
Q7H2 D1

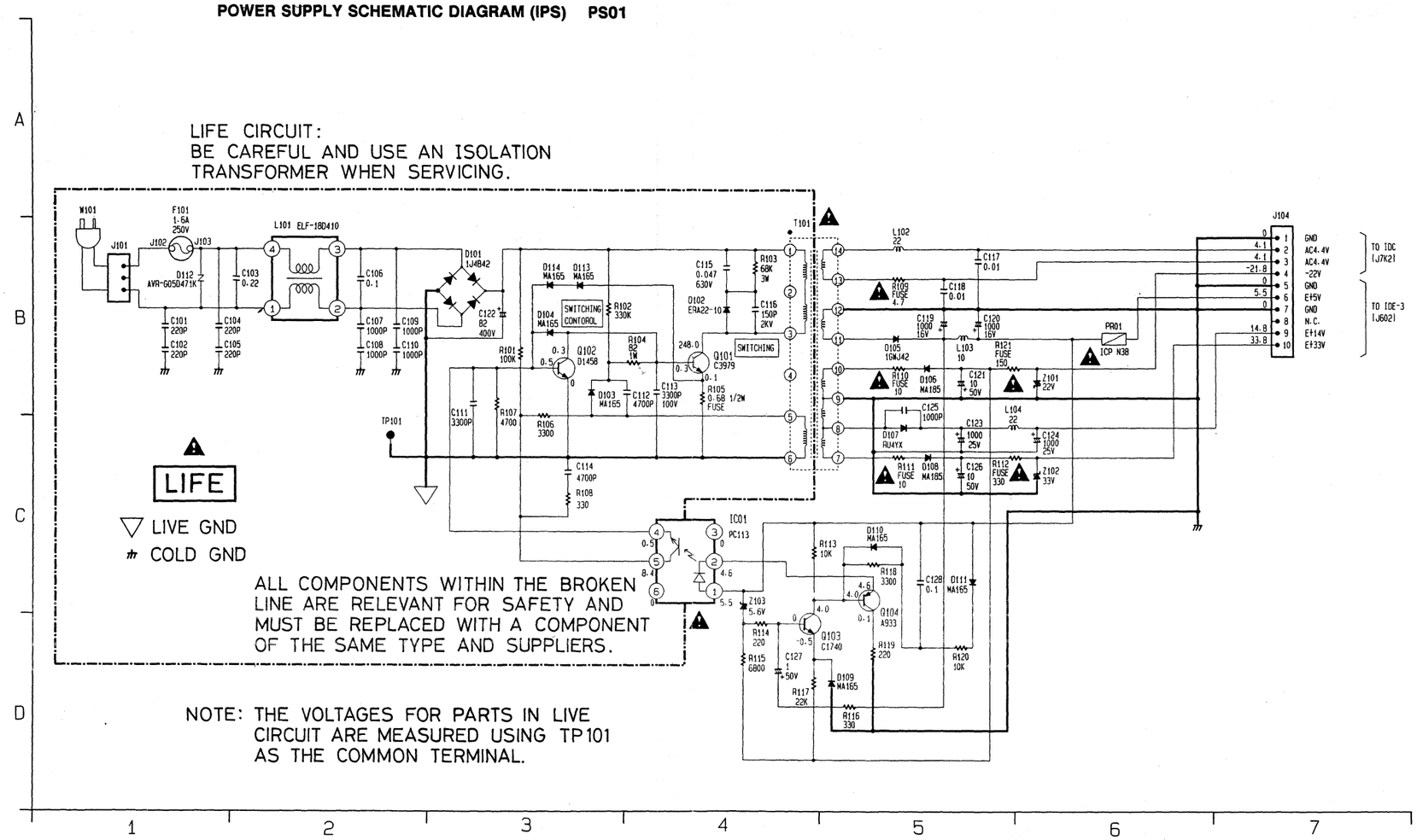
I7D1 C2

D7D1 B6
D7D2 B6
D7D3 B6
D7D4 C6
D7D5 C6
D7D6 C6
D7D7 C7
D7D8 C7
D7D9 C7
D7E0 C6
D7E1 C6

Z6K1 B7

IR7S A2

POWER SUPPLY SCHEMATIC DIAGRAM (IPS) PS01



Q101 B4
Q102 B3
Q103 C5
Q104 C5

IC01 C4

D101 B3
D102 B4
D103 B3
D104 B3
D105 B5
D106 B5
D107 C5
D108 C5
D109 D5
D110 C5
D111 C5
D112 B1
D113 B3
D114 B3

ZENERS
Z101 B6
Z102 C6
Z103 C4

TESTPOINT
TP101

IC01

	1	2	3	4	5	6
MODE						
REC	5.5	4.6	0	0.5	8.4	0
PLAY	5.5	4.6	0	0.5	8.4	0
STOP	5.5	4.6	0	0.6	8.4	0

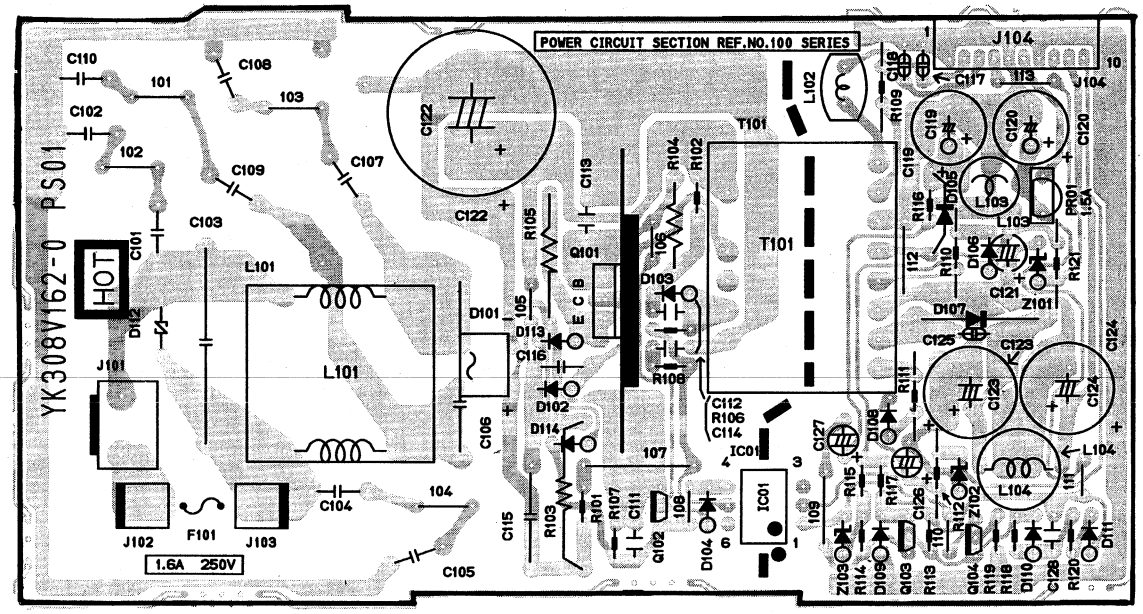
J104 PINS

1	2	3	4	5	6	7	8	9	10
0	3.8	3.8	-21.8	0	5.5	0	–	14.8	33.8

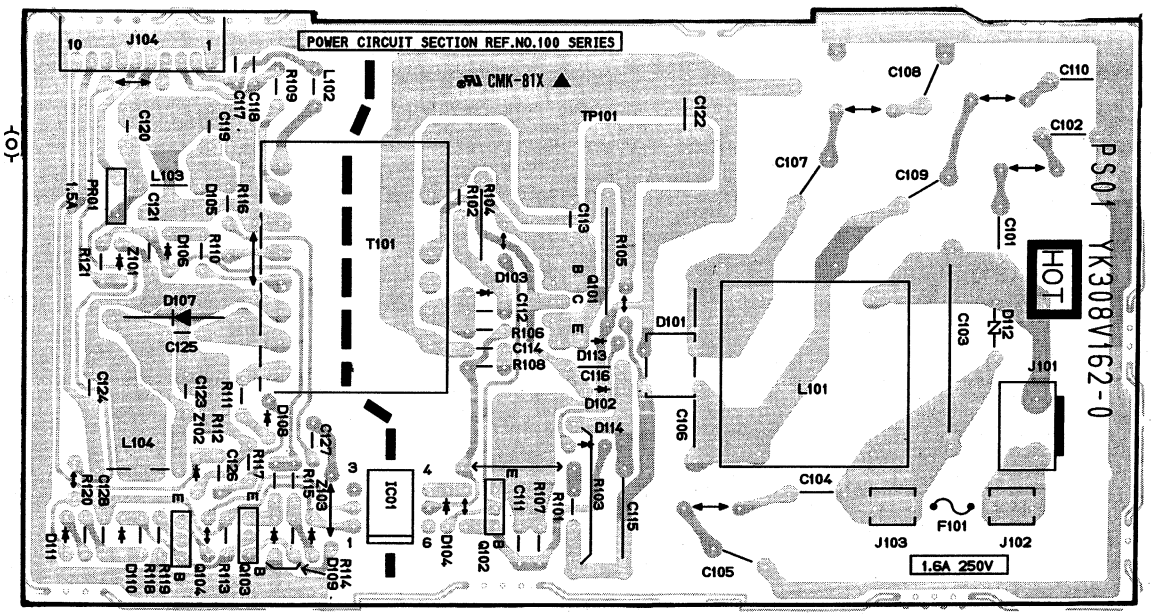
	Q101			Q102			Q103			Q104		
	E	B	C	E	B	C	E	B	C	E	B	C
MODE												
REC	0.1	0.3	+248.0	0	0.5	0.3	-0.5	0	4.0	4.6	4.0	0.1
PLAY	0.1	0.3	+264.0	0	0.5	0.3	-0.5	0	4.1	4.6	4.0	0.1
STOP	0.1	0.3	+249.0	0	0.5	0.3	-0.5	0	4.1	4.6	4.0	0

POWER SUPPLY P.C.B. DRAWING PS01

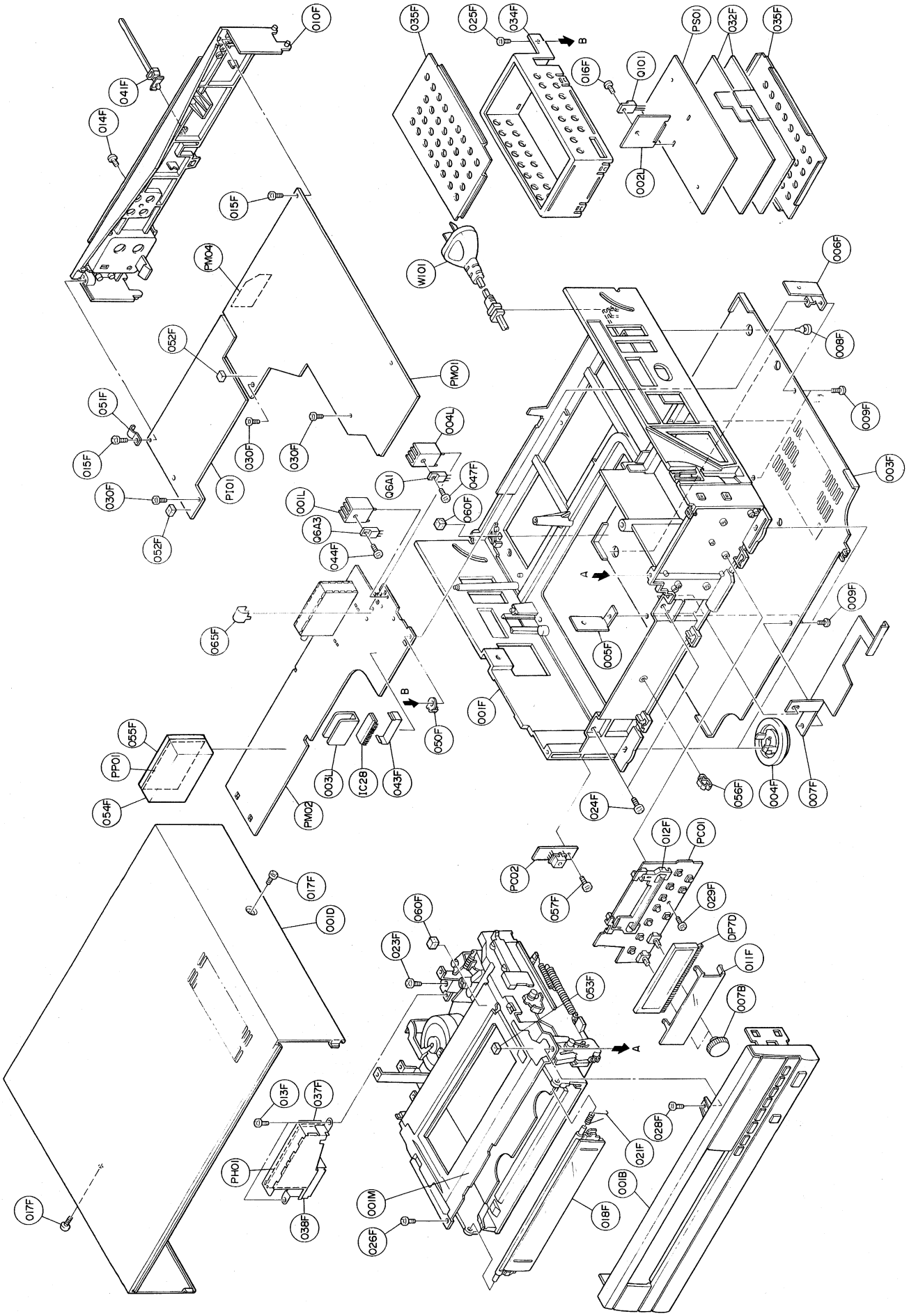
(viewed from the component side)

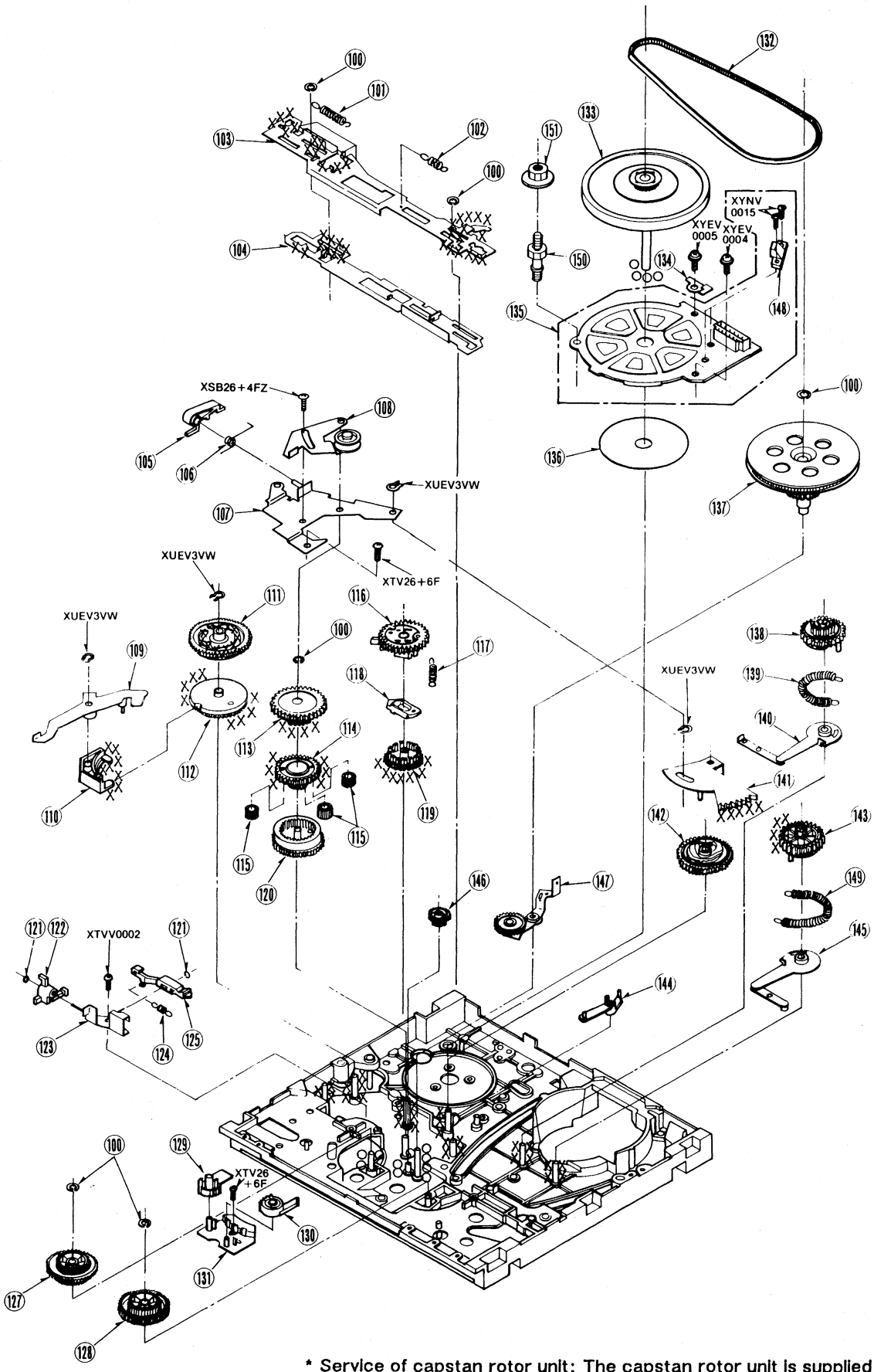


(viewed from the copper side)

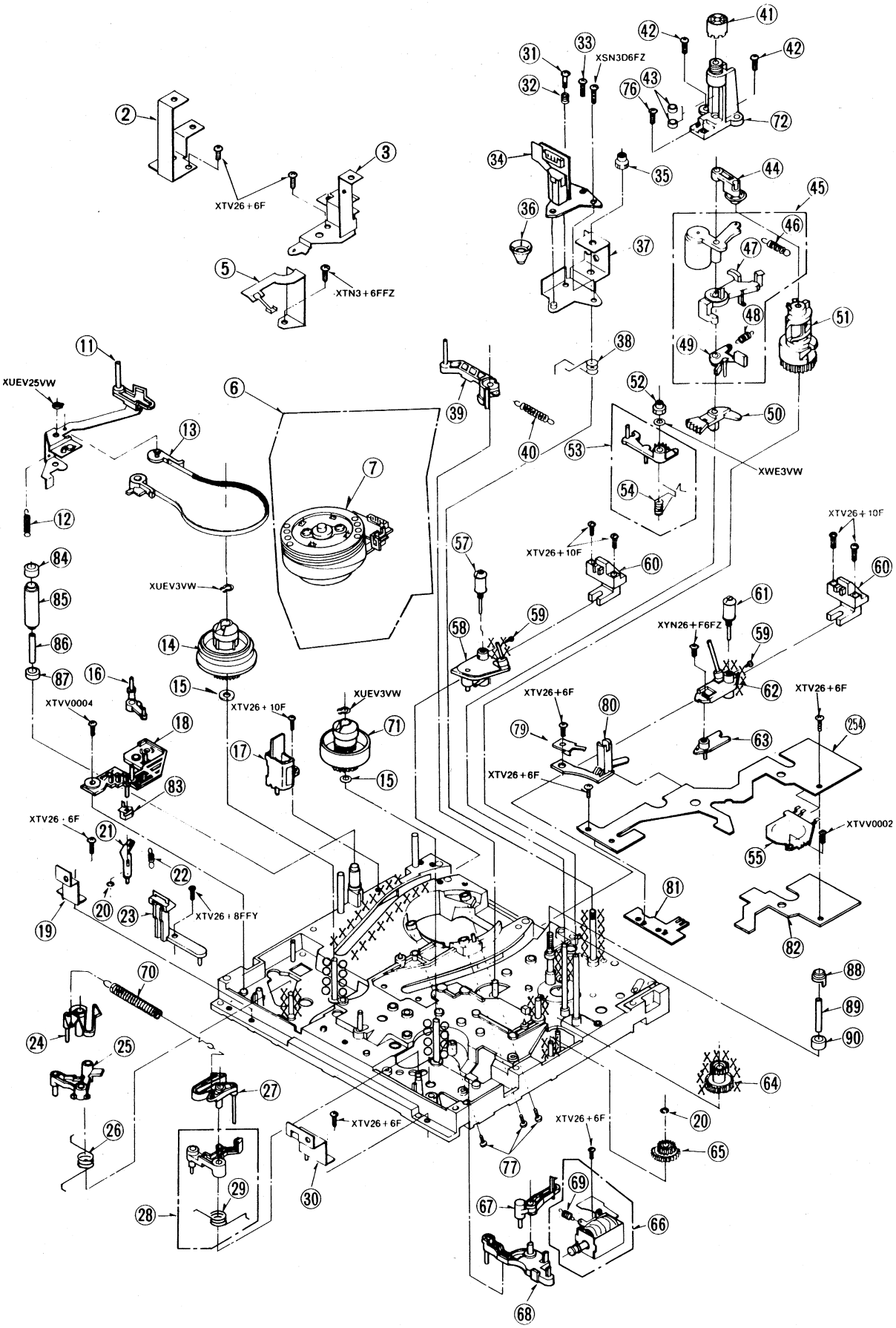


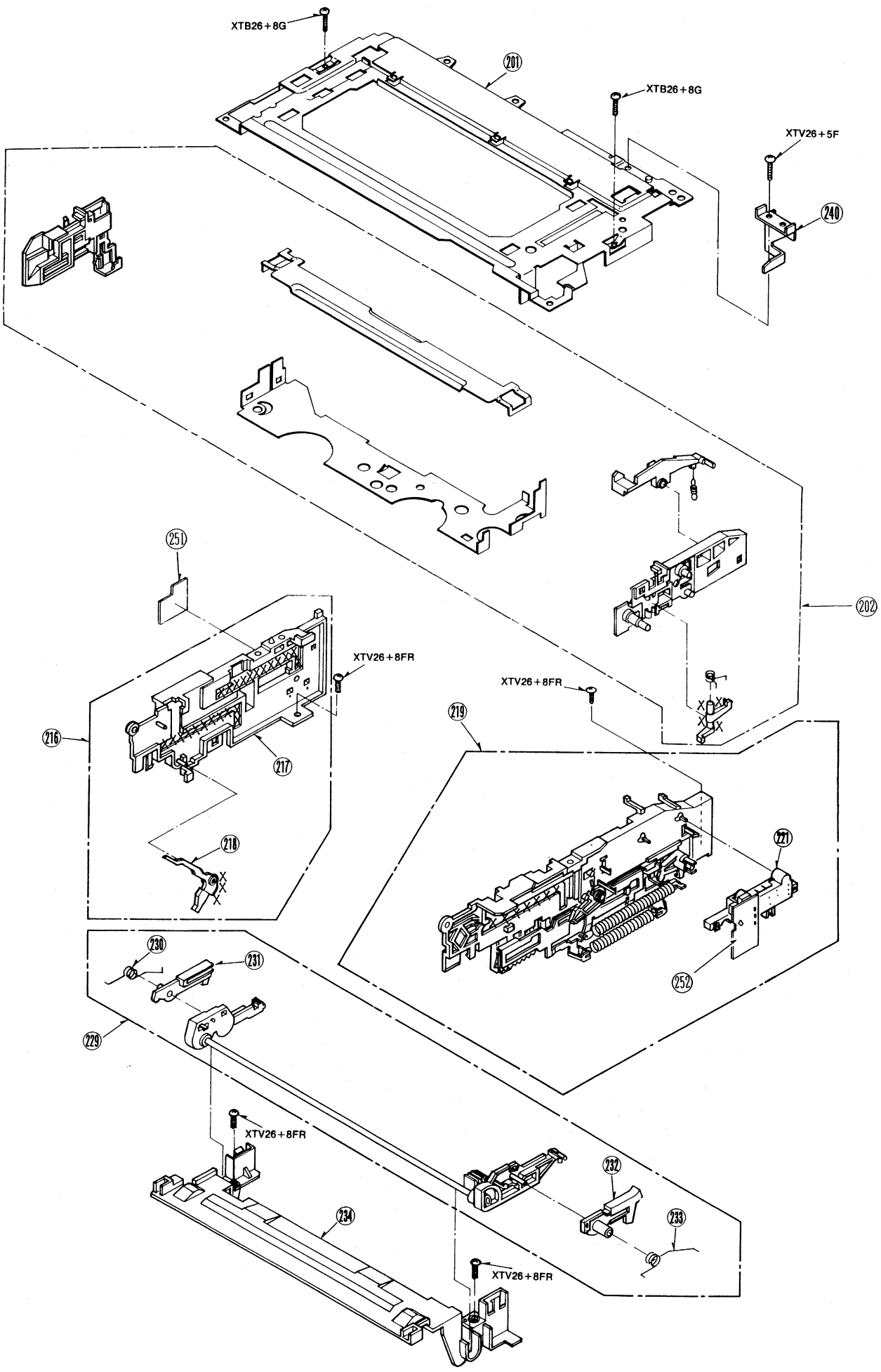
"HOT" printed on PCB has the same meaning as "LIVE"


010F
041F
014F
015F
PM04
052F
051F
015F
030F
P101
052F
030F
030F
PM01
035F
025F
034F
B
016F
W101
PS01
032F
035F
010I
002I
006F
008F
009F
003F
004L
Q6A1
047F
060F
001L
Q6A3
044F
065F
005F
009F
001F
B
050F
055F
PP01
054F
003L
IC28
043F
PM02
024F
056F
004F
007F
012F
PC01
PC02
057F
029F
DP7D
011F
007B
060F
023F
053F
A
017F
001D
013F
037F
PH01
038F
017F
021F
028F
001B
001M
026F
018F



* Service of capstan rotor unit: The capstan rotor unit is supplied as a replacement part in a complete unit with a spring loaded capstan pulley. Do not remove the retaining ring on the capstan pulley of the capstan rotor unit.


XTV26+6F
XTN3+6FFZ
XSN3D6FZ
XUEV25VW
XUEV3VW
XWE3VW
XTV26+10F
XYN26+F6FZ
XTVV0004
XTV26+8FFY
XTVV0002


XTB26+8G
201
XTB26+8G
XTV26+5F
240
202
251
XTV26+8FR
216
217
218
XTV26+8FR
219
221
252
230
231
229
XTV26+8FR
232
233
234
XTV26+8FR

VR6491/75 PARTS LIST

PC01 IDC1 DISPLAY CONTROL 1

DISPLAY		
DP7D	4822 130 90746	FIP8AMW5 FL-DISPLAY
D7D1	4822 130 32362	MA165
D7D2	4822 130 32362	MA165
D7D3	4822 130 32362	MA165
D7D5	4822 130 32362	MA165
D7D9	4822 130 32362	MA165
D7E0	4822 130 32362	MA165
D7E1	4822 130 32362	MA165
ZENER		
Z6K1	4822 130 80132	3.9V ZENER
L7S1	4822 152 20652	2.2mH
R7K1	4822 100 11479	TRACKING VOLUME
R7K2	4822 100 11479	TRACKING VOLUME
R7K3	4822 116 52234	100kΩ J 1/6W
R7K4	4822 116 52234	100kΩ J 1/6W
R7K5	4822 116 52234	100kΩ J 1/6W
R7K6	4822 116 52224	470Ω J 1/6W
R7K7	4822 116 52224	470Ω J 1/6W
C7S1	4822 124 41139	100µF 16V
C7S2	4822 122 40589	0.047 CERAMIC
SWITCHES		
S7D1	4822 276 12455	TACT SWITCH 1 KEY REC
S7D2	4822 276 12455	TACT SWITCH EJECT
S7D3	4822 276 12455	TACT SWITCH REW
S7D4	4822 276 12455	TACT SWITCH STILL
S7D5	4822 276 12455	TACT SWITCH PLAY
S7D6	4822 276 12455	TACT SWITCH FF
S7D7	4822 276 12455	TACT SWITCH STOP
S7D8	4822 276 12455	TACT SWITCH DOWN
S7D9	4822 276 12455	TACT SWITCH UP
S7E0	4822 276 12455	TACT SWITCH REC
S7E1	4822 276 12455	TACT SWITCH POWER
J7K1	4822 265 61201	33 PIN
J7K2	4822 265 30776	4 PIN
J7K3	4822 265 30669	5 PIN

PC02 DC2 DISPLAY CONTROL 2

MISCELLANEOUS		
IR7S	4822 130 81731	RECEIVER
J7K4	4822 265 30669	5 PIN

PH01 IHA4 HEAD AMPLIFIER

Q3H1	4822 130 42431	2SC1740S(R OR S)
Q3H2	4822 130 61486	2SC2058S(P OR Q)
IC33	4822 209 60075	BA7254S
L3H1	4822 157 60446	33µH
L3H4	4822 157 60449	150µH
L3H5	4822 152 20641	100µH
L3H6	4822 152 20663	22µH
L3H8	4822 152 20663	22µH
L3J1	4822 157 60449	150µH
L3J2	4822 157 60445	15µH
R3H1	4822 116 52228	680Ω J 1/6W
R3H2	4822 116 52228	680Ω J 1/6W
R3H3	4822 116 52228	680Ω J 1/6W
R3H4	4822 116 52228	680Ω J 1/6W
R3H5	4822 116 52228	680Ω J 1/6W
R3H6	4822 116 52224	470Ω J 1/6W
R3H7	4822 116 52224	470Ω J 1/6W
R3H8	4822 116 52175	100Ω J 1/6W
R3H9	4822 116 52175	100Ω J 1/6W
R3J2	4822 116 52224	470Ω J 1/6W
R3J3	4822 116 52256	2.2kΩ J 1/6W
R3J4	4822 116 52204	1kΩ J 1/6W
R3J5	4822 116 52228	680Ω J 1/6W
R3J6	4822 116 52243	1.5kΩ J 1/6W
R3J7	4822 116 52204	1kΩ J 1/6W
R3J8	4822 116 52204	1kΩ J 1/6W
R3K1	4822 116 52204	1kΩ J 1/6W
R3K2	4822 116 52204	1kΩ J 1/6W
R3K3	4822 116 52211	150Ω J 1/6W
R3K4	4822 116 52228	680Ω J 1/6W
R3K5	4822 116 52219	330Ω J 1/6W
R3K6	4822 116 52258	220kΩ J 1/6W
R3K7	4822 116 52257	22kΩ J 1/6W

C3H1	4822 122 31205	47pF J CH 50V BLK
C3H2	4822 124 21736	1µF 50V
C3H3	4822 122 33639	1000pF
C3H4	4822 124 21894	10µF 16V
C3H5	5322 122 32143	22pF J CH 50V BLK
C3H6	4822 122 40589	0.047 CERAMIC
C3H7	5322 122 32143	22pF J CH 50V BLK
C3H8	4822 122 40589	0.047 CERAMIC
C3H9	4822 124 21894	10µF 16V
C3J1	4822 124 21894	10µF 16V
C3J2	4822 122 31205	47pF 50V
C3J3	4822 122 40589	0.047 CERAMIC
C3J4	4822 122 31205	47pF 50V
C3J5	4822 122 40589	0.047 CERAMIC
C3J6	4822 124 21894	10µF 16V
C3J7	4822 122 33639	1000pF
C3J8	4822 124 21736	1µF 50V
C3J9	4822 122 40586	0.01µF
C3K2	4822 122 40568	68pF J CH 50V BLK
C3K3	4822 122 40464	220pF 50V
C3K4	4822 122 40568	68pF J CH 50V BLK
C3K5	4822 122 40586	0.01µF
C3K6	4822 122 40586	0.01µF
C3K7	4822 124 41246	47µF 16V
C3K8	4822 122 40586	0.01µF
C3K9	4822 122 40586	0.01µF
C3L1	4822 122 40586	0.01µF
C3L2	4822 122 40586	0.01µF
C3L3	4822 122 33639	1000pF
C3L4	4822 124 41246	47µF 16V
C3L5	4822 122 40586	0.01µF
C3L8	5322 122 32143	22pF J CH 50V BLK
C3L9	4822 122 30034	470pF K 50V
C3M1	4822 122 40568	68pF J CH 50V BLK
C3M2	4822 122 33817	6.8pF

J3H1	4822 265 40796	7 PIN
J3H2	4822 267 50879	8 PIN
J3H3	4822 265 30669	5 PIN

PI01 IIO4 AUDIO / VIDEO SELECTOR

Q3A1	4822 130 42433	2SA933S(R OR S)
Q3A2	4822 130 42433	2SA933S(R OR S)
Q3A3	4822 130 42431	2SC1740S(R OR S)
Q4A4	4822 130 42431	2SC1740S(R OR S)
Q454	4822 130 42433	2SA933S(R OR S)
Q455	4822 130 42431	2SC1740S(R OR S)
Q457	4822 130 42431	2SC1740S(R OR S)

IC42	4822 209 61687	LA7210
IC43	4822 209 60079	LA7222
IC44	4822 209 60079	LA7222
IC46	4822 209 61704	TC9174

D452	4822 130 32362	MA165
D453	4822 130 32362	MA165
D454	4822 130 32362	MA165

ZENERS

Z3A1	4822 130 80273	8.2V ZENER
Z3A2	4822 130 80273	8.2V ZENER
Z3A3	4822 130 80273	8.2V ZENER
Z3A4	4822 130 80273	8.2V ZENER
Z461	4822 130 80273	8.2V ZENER
Z462	4822 130 80273	8.2V ZENER
Z465	4822 130 80273	8.2V ZENER
Z466	4822 130 80273	8.2V ZENER

CRYSTAL

X3A1	4822 242 72939	CSB500E5 500kHz

L454	4822 157 60444	100µH
L456	4822 152 20642	1mH
L457	4822 152 20663	22µH
L458	4822 152 20663	22µH
L459	4822 152 20663	22µH

R3A1	4822 116 52228	680Ω J 1/6W
R3A2	4822 111 41355	75Ω J 1/6W
R3A3	4822 116 52215	220Ω J 1/6W
R3A4	4822 116 52215	220Ω J 1/6W
R3A5	4822 116 52215	220Ω J 1/6W
R3A6	4822 116 52228	680Ω J 1/6W
R3A9	4822 116 52215	220Ω J 1/6W
R3B0	4822 111 41355	75Ω J 1/6W
R3B1	4822 116 52219	330Ω J 1/6W
R3B2	4822 116 52224	470Ω J 1/6W
R3B3	4822 116 52204	1kΩ J 1/6W
R3B4	4822 116 52204	1kΩ J 1/6W
R3B5	4822 116 52272	330kΩ J 1/6W
R3B6	4822 116 52244	15kΩ J 1/6W
R3B7	4822 116 52297	68kΩ J 1/6W
R3B8	4822 116 52204	1kΩ J 1/6W
R3B9	4822 116 52243	1.5kΩ J 1/6W
R3C0	4822 116 52215	220Ω J 1/6W
R3C1	4822 116 52204	1kΩ J 1/6W
R3C2	4822 116 52215	220Ω J 1/6W
R3C3	4822 116 52283	4.7kΩ J 1/6W
R3C4	4822 116 52283	4.7kΩ J 1/6W
R3C5	4822 111 41355	75Ω J 1/6W
R3C6	4822 111 41355	75Ω J 1/6W
R3C7	4822 116 52204	1kΩ J 1/6W
R3C9	4822 116 52233	10kΩ J 1/6W
R4A2	4822 116 52204	1kΩ J 1/6W
R4E5	4822 116 52204	1kΩ J 1/6W
R4E6	4822 116 52204	1kΩ J 1/6W
R4E7	4822 116 52204	1kΩ J 1/6W
R4E8	4822 116 52175	100Ω J 1/6W
R4E9	4822 116 52175	100Ω J 1/6W
R4F1	4822 116 52175	100Ω J 1/6W
R4F2	4822 116 52269	3.3kΩ J
R4F6	4822 116 52233	10kΩ J 1/6W
R4F7	4822 111 91285	100Ω J 1/6W
R4G1	4822 116 52233	10kΩ J 1/6W
R4G4	4822 116 52269	3.3kΩ J
R4G5	4822 116 52234	100kΩ J 1/6W
R4G6	4822 116 52234	100kΩ J 1/6W
R4G7	4822 116 52233	10kΩ J 1/6W
R451	4822 116 52244	15kΩ J 1/6W
R452	4822 116 52233	10kΩ J 1/6W
R454	4822 111 91285	100Ω J 1/6W
R468	4822 116 52244	15kΩ J 1/6W
R469	4822 116 52245	150kΩ J 1/6W
R470	4822 116 52256	2.2kΩ J 1/6W
R472	4822 116 52257	22kΩ J 1/6W
R474	4822 116 52215	220Ω J 1/6W
R486	4822 116 52234	100kΩ J 1/6W
R489	4822 116 52233	10kΩ J 1/6W
R490	4822 116 52204	1kΩ J 1/6W
R491	4822 116 52257	22kΩ J 1/6W
R492	4822 116 52204	1kΩ J 1/6W
R493	4822 116 52204	1kΩ J 1/6W
R494	4822 116 52204	1kΩ J 1/6W
R495	4822 116 52204	1kΩ J 1/6W
R496	4822 116 52204	1kΩ J 1/6W
R497	4822 116 52204	1kΩ J 1/6W
R498	4822 116 52204	1kΩ J 1/6W
R499	4822 116 52204	1kΩ J 1/6W

C3A1	4822 124 21894	10µF 16V
C3A2	4822 124 21894	10µF 16V
C3A3	4822 124 21852	470µF 16V M
C3A4	4822 124 41153	220µF 16V
C3A5	5322 122 31626	100pF J CH 50V BLK
C3A6	5322 122 31626	100pF J CH 50V BLK
C3A7	4822 122 33639	1000pF
C3A8	5322 122 32335	330pF K 50V
C3A9	4822 124 21407	0.47µF 50V
C3B0	4822 124 21736	1µF 50V
C3B1	4822 122 33639	1000pF
C3B2	4822 124 21407	0.47µF 50V
C3B3	4822 124 21894	10µF 16V
C3B4	4822 122 40586	10000pF
C3B5	4822 124 21894	10µF 16V
C3B6	4822 124 21894	10µF 16V
C451	4822 124 41246	47µF 16V
C452	4822 124 21894	10µF 16V
C453	4822 124 21894	10µF 16V
C461	5322 122 31626	100pF J CH 50V
C464	4822 122 30114	2200pF
C465	4822 122 33639	1000pF
C472	4822 124 21736	1µF 50V
C473	4822 124 21894	10µF 16V
C474	4822 124 21894	10µF 16V
C475	4822 124 21736	1µF 50V
C476	4822 124 21894	10µF 16V
C477	4822 122 40586	10000pF
C478	4822 124 21894	10µF 16V

C479	4822 124 21894	10µF 16V
C480	4822 122 40586	10000pF CERAMIC
C481	4822 122 40464	220pF 50V
C482	4822 122 40464	220pF 50V
C483	4822 122 40464	220pF 50V
C484	4822 124 41246	47µF 16V
C485	4822 124 21894	10µF 16V
C486	4822 124 21894	10µF 16V
RF MODULATOR		
E451	4822 214 32871	MDLK6D403A ALPS
J402	4822 265 30562	4 PIN RCA
J452	4822 265 51256	23 PIN FFC
J455	4822 265 40957	12 PIN FFC

PM01 IDE1 LOGIC

Q602	4822 130 42431	2SC1740S(R OR S)
Q604	4822 130 61474	2SD592R
Q605	4822 130 61475	2SD893R
Q606	4822 130 42433	2SA933S(R OR S)
Q607	4822 130 61476	2SD1423Q
Q608	4822 130 42433	2SA933S(R OR S)
Q609	4822 130 42431	2SC1740S(R OR S)
Q611	4822 130 42431	2SC1740S(R OR S)
Q612	4822 130 42431	2SC1740S(R OR S)
Q613	4822 130 42431	2SC1740S(R OR S)
Q619	4822 130 61473	2SA1512R
Q620	4822 130 61473	2SA1512R
Q623	4822 130 42431	2SC1740S(R OR S)
Q624	4822 130 42433	2SA933S(R OR S)
Q630	4822 130 42431	2SC1740S(R OR S)

IC61	4822 209 60045	339 TYPE QUAD CONPAR
IC63	4822 209 60052	MN15362 VBX
IC64	4822 209 60051	MN4510B

D604	4822 130 32362	MA165
D605	4822 130 32362	MA165
D606	4822 130 32362	MA165
D608	4822 130 32362	MA165
D609	4822 130 32362	MA165
D610	4822 130 32362	MA165
D611	4822 130 32362	MA165
D612	4822 130 32362	MA165
D613	4822 130 32362	MA165
D614	4822 130 32362	MA165
D616	4822 130 32362	MA165
D617	4822 130 32362	MA165
D618	4822 130 32362	MA165
D621	4822 130 32362	MA165
D622	4822 130 32362	MA165
D623	4822 130 32362	MA165
D624	4822 130 32362	MA165
D633	4822 130 32362	MA165
D634	4822 130 32362	MA165

CRYSTAL

X601	4822 242 72403	CST3.58MGW CERALOCK

L601	4822 152 20652	2.2mH

R601	4822 116 52219	330Ω J 1/6W
R603	4822 116 52224	470Ω J 1/6W
R604	4822 116 52245	150kΩ J 1/6W
R605	4822 116 52257	22kΩ J 1/6W
R606	4822 116 52235	1MΩ J 1/6W
R607	4822 116 52257	22kΩ J 1/6W
R608	4822 116 52257	22kΩ J 1/6W
R609	4822 116 52297	68kΩ J 1/6W
R610	4822 116 52257	22kΩ J 1/6W
R611	4822 116 52235	1MΩ J 1/6W
R612	4822 116 52269	3.3kΩ J 1/6W
R613	4822 116 52271	33kΩ J 1/6W
R614	4822 116 52271	33kΩ J 1/6W
R615	4822 116 52284	47kΩ J 1/6W
R616	4822 116 60462	18Ω J 2W
R617	4822 116 52211	150Ω J 1/6W
R618	4822 116 52215	220Ω J 1/6W
R619	4822 116 52243	1.5kΩ J 1/6W
R620	4822 116 52296	6.8kΩ J 1/6W
R621	4822 116 52233	10kΩ J 1/6W
R622	4822 116 52233	10kΩ J 1/6W
R623	4822 113 90119	22Ω FUSE RESISTOR
R624	4822 116 52233	10kΩ J 1/6W
R625	4822 116 52257	22kΩ J 1/6W
R626	4822 116 52257	22kΩ J 1/6W
R627	4822 116 52284	47kΩ J 1/6W
R628	4822 116 52284	47kΩ J 1/6W
R629	4822 116 52284	47kΩ J 1/6W
R630	4822 116 52284	47kΩ J 1/6W
R632	4822 116 52256	2.2kΩ J 1/6W
R633	4822 116 52204	1kΩ J 1/6W
R634	4822 116 52244	15kΩ J 1/6W
R635	4822 116 52244	15kΩ J 1/6W
R636	4822 116 52175	100Ω J 1/6W
R637	4822 116 52175	100Ω J 1/6W
R638	4822 116 52175	100Ω J 1/6W
R639	4822 116 52204	1kΩ J 1/6W
R640	4822 116 52215	220Ω J 1/6W
R641	4822 116 52224	470Ω J 1/6W
R642	4822 116 52211	150Ω J 1/6W
R643	4822 116 52224	470Ω J 1/6W
R644	4822 116 52224	470Ω J 1/6W
R645	4822 116 52175	100Ω J 1/6W
R646	4822 116 52257	22kΩ J 1/6W
R647	4822 116 52257	22kΩ J 1/6W
R649	4822 116 52284	47kΩ J 1/6W
R650	4822 116 52257	22kΩ J 1/6W
R651	4822 116 52284	47kΩ J 1/6W
R652	4822 116 52284	47kΩ J 1/6W
R653	4822 116 52244	15kΩ J 1/6W
R654	4822 116 52233	10kΩ J 1/6W
R657	4822 116 52233	10kΩ J 1/6W
R666	4822 116 52233	10kΩ J 1/6W
R667	4822 116 52283	4.7kΩ J 1/6W
R669	4822 116 52234	100kΩ J 1/6W
R670	4822 116 52283	4.7kΩ J 1/6W
R671	4822 116 52269	3.3kΩ J 1/6W
R672	4822 116 52243	1.5kΩ J 1/6W
R673	4822 116 52269	3.3kΩ J 1/6W
R674	4822 116 52283	4.7kΩ J 1/6W
R675	4822 116 52269	3.3kΩ J 1/6W
R676	4822 116 52284	47kΩ J 1/6W
R681	4822 116 52283	4.7kΩ J 1/6W
R682	4822 116 52204	1kΩ J 1/6W
R683	4822 116 52204	1kΩ J 1/6W
R684	4822 116 52233	10kΩ J 1/6W
R685	4822 116 52233	10kΩ J 1/6W
R686	4822 116 52204	1kΩ J 1/6W
R687	4822 116 52204	1kΩ J 1/6W
R691	4822 116 52284	47kΩ J 1/6W
R692	4822 116 52284	47kΩ J 1/6W
R693	4822 116 52204	1kΩ J 1/6W
R694	4822 116 52233	10kΩ J 1/6W
R699	4822 116 52233	10kΩ J 1/6W

C601	4822 124 41246	47µF 16V
C603	4822 122 40586	10000pF
C604	4822 124 41246	47µF 16V
C606	4822 122 40586	10000pF
C607	4822 122 40586	10000pF
C609	4822 124 41246	47µF 16V
C610	4822 124 41246	47µF 16V
C615	4822 122 40586	10000pF

C682	4822 122 33639	1000pF
C683	4822 122 33639	1000pF
C684	4822 122 40589	0.047 CERAMIC
J212	4822 265 30668	4 PIN
J213	4822 265 30777	3 PIN
J214	4822 265 30671	6 PIN
J216	4822 265 30669	5 PIN
J219	4822 265 30669	5 PIN
J605	4822 265 61199	31 PIN

PM01 IDE2 SERVO

Q207	4822 130 42431	2SC1740S(R OR S)
Q208	4822 130 42431	2SC1740S(R OR S)
Q209	4822 130 42431	2SC1740S(R OR S)
Q210	4822 130 42433	2SA933S(R OR S)
Q211	4822 130 42433	2SA933S(R OR S)
Q212	4822 130 42433	2SA933S(R OR S)
Q213	4822 130 42433	2SA933S(R OR S)
Q214	4822 130 42433	2SA933S(R OR S)
Q215	4822 130 42433	2SA933S(R OR S)
Q216	4822 130 42431	2SC1740S(R OR S)
Q217	4822 130 42433	2SA933S(R OR S)
Q218	4822 130 42433	2SA933S(R OR S)
Q219	4822 130 42431	2SC1740S(R OR S)
Q220	4822 130 42431	2SC1740S(R OR S)
Q221	4822 130 42431	2SC1740S
Q222	4822 130 42433	2SA933S(R OR S)
Q223	4822 130 42431	2SC1740S
Q224	4822 130 42431	2SC1740S(R OR S)
Q225	4822 130 42431	2SC1740S(R OR S)
Q226	4822 130 42431	2SC1740S(R OR S)
Q227	4822 130 42431	2SC1740S(R OR S)
Q228	4822 130 42431	2SC1740S(R OR S)

IC21	4822 209 61705	UPD6160CA606
IC22	4822 209 61686	QUAD OP AMP TYPE 324
IC25	4822 209 60493	MN15312VPL
IC26	4822 209 83843	TC4069UBP

D201	4822 130 32362	MA165
D202	4822 130 32362	MA165
D203	4822 130 32362	MA165
D204	4822 130 32362	MA165
D205	4822 130 32362	MA165
D206	4822 130 32362	MA165
D207	4822 130 32362	MA165
D208	4822 130 32362	MA165
D209	4822 130 32362	MA165
D210	4822 130 32362	MA165

L201	4822 152 20652	2.2mH

R2A0	4822 116 52297	68kΩ J 1/6W
R2A1	4822 116 52297	68kΩ J 1/6W
R2A2	4822 116 52243	1.5kΩ J 1/6W
R2A3	4822 116 52269	3.3kΩ J 1/6W
R2A4	4822 116 52271	33kΩ J 1/6W
R2A5	4822 116 52234	100kΩ J 1/6W
R2A6	4822 116 52245	150kΩ J 1/6W
R2A7	4822 116 52245	150kΩ J 1/6W
R2A8	4822 116 52269	3.3kΩ J 1/6W
R2A9	4822 100 11473	220kΩ
R2B0	4822 100 11473	220kΩ
R2B1	4822 116 52269	3.3kΩ J 1/6W
R2B2	4822 116 52224	470Ω J 1/6W
R2B3	4822 116 52256	2.2kΩ J 1/6W
R2B8	4822 116 52283	4.7kΩ J 1/6W
R2D1	4822 116 52283	4.7kΩ J 1/6W
R2D2	4822 116 52235	1MΩ J 1/6W
R2D3	4822 116 52204	1kΩ J 1/6W
R2D4	4822 116 52204	1kΩ J 1/6W
R2D5	4822 116 52257	22kΩ J 1/6W
R2D6	4822 116 52256	2.2kΩ J 1/6W
R2D7	4822 116 52256	2.2kΩ J 1/6W
R2D8	4822 116 52257	22kΩ J 1/6W
R2D9	4822 116 52245	150kΩ J 1/6W
R2E0	4822 116 52245	150kΩ J 1/6W
R2E1	4822 116 52204	1kΩ J 1/6W
R2E2	4822 116 52244	15kΩ J 1/6W
R2E3	4822 116 52256	2.2kΩ J 1/6W
R2E4	4822 116 52228	680Ω J 1/6W
R2E5	4822 116 52234	100kΩ J 1/6W
R2E6	4822 116 52297	68kΩ J 1/6W
R2F1	4822 116 52257	22kΩ J 1/6W
R2F2	4822 116 52204	1kΩ J 1/6W
R2F3	4822 116 52204	1kΩ J 1/6W
R2F4	4822 116 52204	1kΩ J 1/6W
R2F5	4822 116 52272	330kΩ J 1/6W
R201	4822 116 52204	1kΩ J 1/6W
R202	4822 116 52271	33kΩ J 1/6W
R203	4822 116 52243	1.5kΩ J 1/6W
R204	4822 116 52233	10kΩ J 1/6W
R205	4822 116 52215	220Ω J 1/6W
R206	4822 116 52271	33kΩ J 1/6W
R207	4822 116 52243	1.5kΩ J 1/6W
R208	4822 116 52283	4.7kΩ J 1/6W
R209	4822 116 52297	68kΩ J 1/6W
R210	4822 116 52204	1kΩ J 1/6W
R211	4822 116 52233	10kΩ J 1/6W
R212	4822 116 52215	220Ω J 1/6W
R213	4822 116 52257	22kΩ J 1/6W
R214	4822 116 52233	10kΩ J 1/6W
R215	4822 116 52257	22kΩ J 1/6W
R216	4822 116 52284	47kΩ J 1/6W
R217	4822 116 52284	47kΩ J 1/6W
R218	4822 116 52284	47kΩ J 1/6W
R219	4822 116 52284	47kΩ J 1/6W
R220	4822 116 52204	1kΩ J 1/6W
R221	4822 116 52269	3.3kΩ J 1/6W
R222	4822 116 52298	680kΩ J 1/6W
R223	4822 116 52258	220kΩ J 1/6W
R224	4822 116 52284	47kΩ J 1/6W
R225	4822 100 11372	47kΩ VARIABLE RES.
R226	4822 116 52244	15kΩ J 1/6W
R227	4822 116 52245	150kΩ J 1/6W
R228	4822 116 52272	330kΩ J 1/6W
R229	4822 116 52297	68kΩ J 1/6W
R230	4822 116 52245	150kΩ J 1/6W
R231	4822 116 52256	2.2kΩ J 1/6W
R232	4822 116 52284	47kΩ J 1/6W
R233	4822 116 52269	3.3kΩ J 1/6W
R234	4822 116 52297	68kΩ J 1/6W
R235	4822 116 52285	470kΩ J 1/6W
R236	4822 116 52233	10kΩ J 1/6W
R237	4822 116 52271	33kΩ J 1/6W
R238	4822 116 52271	33kΩ J 1/6W
R240	4822 116 52269	3.3kΩ J 1/6W
R243	4822 116 52243	1.5kΩ J 1/6W
R244	4822 116 52284	47kΩ J 1/6W
R245	4822 116 52284	47kΩ J 1/6W
R246	4822 116 52233	10kΩ J 1/6W
R247	4822 116 52233	10kΩ J 1/6W
R248	4822 116 52257	22kΩ J 1/6W
R249	4822 116 52257	22kΩ J 1/6W
R250	4822 116 52256	2.2kΩ J 1/6W
R251	4822 116 52245	150kΩ J 1/6W
R252	4822 116 52256	2.2kΩ J 1/6W
R253	4822 100 11471	100kΩ

R254	4822 116 52284	47kΩ J 1/6W
R255	4822 116 52284	47kΩ J 1/6W
R256	4822 116 52233	10kΩ J 1/6W
R257	4822 100 11471	100kΩ
R258	4822 116 52233	10kΩ J 1/6W
R259	4822 116 52245	150kΩ J 1/6W
R260	4822 116 52297	68kΩ J 1/6W
R261	4822 116 52257	22kΩ J 1/6W
R262	4822 116 52257	22kΩ J 1/6W
R263	4822 116 52257	22kΩ J 1/6W
R264	4822 116 52284	47kΩ J 1/6W
R265	4822 116 52271	33kΩ J 1/6W
R266	4822 116 52297	68kΩ J 1/6W
R267	4822 116 52219	330Ω J 1/6W
R270	4822 116 52234	100kΩ J 1/6W
R271	4822 116 52283	4.7kΩ J 1/6W
R272	4822 100 11472	CERMET VR 2.2kΩ
R273	4822 116 52296	6.8kΩ J 1/6W
R274	4822 116 52204	1kΩ J 1/6W
R280	4822 100 11471	100kΩ TRIMMING RESISTOR
R281	4822 116 52283	4.7kΩ J 1/6W
R282	4822 116 52284	47kΩ J 1/6W
R283	4822 116 52284	47kΩ J 1/6W
R284	4822 116 52272	330kΩ J 1/6W
R285	4822 116 52284	47kΩ J 1/6W
R286	4822 116 52284	47kΩ J 1/6W
R287	4822 116 52257	22kΩ J 1/6W
R288	4822 116 52284	47kΩ J 1/6W
R289	4822 116 52284	47kΩ J 1/6W
R290	4822 116 52257	22kΩ J 1/6W
R291	4822 116 52257	22kΩ J 1/6W
R292	4822 116 52271	33kΩ J 1/6W
R293	4822 116 52298	680kΩ J 1/6W
R294	4822 116 52269	3.3kΩ J 1/6W
R295	4822 116 52233	10kΩ J 1/6W
R296	4822 116 52257	22kΩ J 1/6W
R297	4822 116 52233	10kΩ J 1/6W
R298	4822 116 52296	6.8kΩ J 1/6W
R299	4822 116 52257	22kΩ J 1/6W

C2A0	4822 124 41139	100µF 16V
C2A1	4822 124 41139	100µF 16V
C2A2	4822 122 30034	470pF
C201	4822 124 21852	470µF 16V
C202	4822 124 21844	4.7µF 50V
C203	4822 122 33795	4700pF K 16V
C204	4822 124 21407	0.47µF 50V
C205	4822 122 33795	4700pF 16V
C206	4822 122 40589	0.047 CERAMIC
C207	4822 122 40586	10000pF
C208	4822 122 40589	0.047 CERAMIC
C209	4822 124 21894	10µF 16V
C210	4822 124 23112	10µF 16V BP
C211	4822 124 21894	10µF 16V
C212	4822 124 41153	220µF 16V

C213	4822 124 21894	10µF 16V
C214	4822 124 21903	1µF 50V BP
C215	4822 124 21903	1µF 50V BP
C216	4822 124 21894	10µF 16V ELECTR.
C217	4822 124 21894	10µF 16V ELECTR.
C218	4822 122 33639	1000pF
C219	4822 122 33795	4700pF 16V
C220	4822 121 42698	0.1µF ,J,N, 50V
C221	4822 121 42698	0.1µF ,J,N, 50V
C222	4822 124 21407	0.47µF 50V
C223	4822 121 41856	0.022µF
C224	4822 124 22768	0.33µF 50V ELECTR.
C236	4822 121 42698	0.1µF ,J,N,
C237	4822 124 41246	47µF 16V
C238	4822 122 40586	10000pF
C239	4822 121 42666	0.22µF ,J,T, 50V
C240	4822 122 33795	4700pF
C241	4822 121 42698	0.1µF ,J,N, 50V
C242	4822 122 33795	4700pF
C243	4822 124 41246	47µF 16V
C244	4822 122 33639	1000pF
C245	4822 124 21894	10µF 16V
C246	4822 122 33639	1000pF
C247	4822 121 42771	2200pF
C248	4822 121 42698	0.1µF ,J,N, 50V
C249	4822 124 21736	1µF 50V ELECTR.
C250	4822 124 23112	10µF 16V BP
C251	4822 124 41246	47µF 16V
C252	4822 121 42616	0.0033µF J 50V
C253	4822 124 21407	0.47µF 50V
C254	4822 124 41246	47µF 16V
C255	4822 122 40586	10000pF
C256	4822 124 21894	10µF 16V
C257	4822 122 40586	10000pF
C258	4822 122 33639	1000pF
C286	4822 121 42698	0.1µF ,J,N, 50V
C290	4822 121 41856	0.022µF ,J,N, 50V
C291	4822 124 21894	10µF 16V
C292	4822 124 21844	4.7µF 50V
C293	4822 122 30114	2200pF K 50V
C294	4822 121 42666	0.22µF ,J,T, 50V
C295	4822 122 40586	10000pF
C296	4822 122 40586	10000pF
C297	4822 124 41246	47µF 16V
C299	4822 124 21407	0.47µF 50V

J210	4822 265 40796	7 PIN
J211	4822 265 30669	5 PIN
J215	4822 265 30668	4 PIN

PM01 ITT TIMER TUNING

Q6K1	4822 130 42431	2SC1740S(R OR S)
IC6K	4822 209 61728	TMP47C1670N TTU-COM
IC6L	4822 209 71435	MN1280 RESET
IC6M	4822 209 60047	MN1280-RESET
IC6N	4822 209 61725	BR93C46
D6K1	4822 130 32362	MA165
D6K4	4822 130 32362	MA165
CRYSTALS		
X6K1	4822 242 72596	CST6.00MGW-TF01
X6K2	4822 242 72236	DT-38 32.768kHz
R6K1	4822 116 52233	10kΩ J 1/6W
R6K6	4822 116 52233	10kΩ J 1/6W
R6K9	4822 116 52233	10kΩ J 1/6W
R6L0	4822 116 52233	10kΩ J 1/6W
R6L1	4822 116 52233	10kΩ J 1/6W
R6L5	4822 116 52233	10kΩ J 1/6W
R6L6	4822 116 52284	47kΩ J 1/6W
R6L7	4822 116 52284	47kΩ J 1/6W
R6L8	4822 116 52175	100Ω J 1/6W
R6L9	4822 116 52175	100Ω J 1/6W
R6M2	4822 116 52257	22kΩ J 1/6W
C6K1	4822 124 23181	DYNA DB-5R5D104
C6K2	4822 124 21894	10µF 16V
C6K4	4822 121 42698	0.1µF ,J,N, 50V
C6K5	4822 125 50437	3P-10P TRIM VCT5
C6K6	5322 122 32143	22pF J CH 50V BLK
C6K7	4822 122 33639	1000pF
C6K8	4822 122 33639	1000pF
C6K9	4822 122 40589	0.047 CERAMIC
J6K1	4822 265 61202	33 PIN

PM01 IVA1 LUMINANCE

Q301	4822 130 42431	2SC1740S(R OR S)
Q302	4822 130 42431	2SC1740S(R OR S)
Q303	4822 130 42433	2SA933S(R OR S)
Q305	4822 130 42433	2SA933S(R OR S)
Q306	4822 130 42433	2SA933S(R OR S)
IC31	4822 209 71938	BA7255BS
IC32	4822 209 61727	LC8992 1H CCD
IC33	4822 209 71903	NJM7805FA +5V
D301	4822 130 32362	MA165
D302	4822 130 32362	MA165
D303	4822 130 32362	MA165
D304	4822 130 32362	MA165

ZENER

Z305	4822 130 80273	8.2V ZENER
L301	4822 152 20663	22µH
L303	4822 157 60444	100µH
L304	4822 157 60454	68µH
L305	4822 157 60444	100µH

FILTERS

FL31	4822 242 72948	3.0MHz LPF
R301	4822 100 11372	47kΩ
R302	4822 116 52233	10kΩ J 1/6W
R304	4822 116 52298	680kΩ J 1/6W
R305	4822 116 52271	33kΩ J 1/6W
R308	4822 116 52271	33kΩ J 1/6W
R309	4822 116 52204	1kΩ J 1/6W
R311	4822 116 52257	22kΩ J 1/6W
R314	4822 116 52204	1kΩ J 1/6W
R315	4822 116 52228	680Ω J 1/6W
R316	4822 116 52204	1kΩ J 1/6W
R317	4822 116 52204	1kΩ J 1/6W
R318	4822 116 52296	6.8kΩ J 1/6W
R319	4822 116 52271	33kΩ J 1/6W
R320	4822 116 52211	150Ω J 1/6W
R321	4822 116 52224	470Ω J 1/6W
R323	4822 116 52228	680Ω J 1/6W
R324	4822 116 52243	1.5kΩ J 1/6W
R326	4822 116 52269	3.3kΩ J 1/6W
R327	4822 116 52256	2.2kΩ J 1/6W
R328	4822 100 20681	2.2kΩ
R332	4822 100 11351	10kΩ
R333	4822 100 11373	4.7kΩ
R334	4822 116 52233	10kΩ J 1/6W
R335	4822 116 52256	2.2kΩ J 1/6W
R336	4822 116 52204	1kΩ J 1/6W
R337	4822 116 52297	68kΩ J 1/6W
R340	4822 116 52204	1kΩ J 1/6W
R342	4822 116 52224	470Ω J 1/6W
R345	4822 116 52233	10kΩ J 1/6W
R346	4822 116 52175	100Ω J 1/6W
R347	4822 116 52283	4.7kΩ J 1/6W
R348	4822 116 52283	4.7kΩ J 1/6W
R351	4822 116 52271	33kΩ J 1/6W
R352	4822 116 52297	68kΩ J 1/6W
R353	4822 116 52271	33kΩ J 1/6W
R354	4822 111 91285	100Ω J 1/6W
R356	4822 116 52272	330kΩ J 1/6W
R360	4822 116 52204	1kΩ J 1/6W
R361	4822 116 52219	330Ω J 1/6W
R363	4822 116 60207	15Ω 2W
R364	4822 116 60207	15Ω 2W
R365	4822 116 52269	3.3kΩ J 1/6W
C301	4822 124 21894	10µF 16V
C303	4822 122 40586	0.01µF
C304	4822 122 33795	4700pF
C305	4822 122 40586	0.01µF
C306	4822 122 40586	0.01µF
C307	4822 122 40586	0.01µF
C309	4822 124 21894	10µF 16V
C310	4822 124 21894	10µF 16V
C311	4822 122 40586	0.01µF
C312	4822 122 40568	68pF J CH 50V BLK
C313	4822 122 40568	68pF J CH 50V BLK
C315	4822 122 40568	68pF J CH 50V BLK
C316	4822 122 40568	68pF J CH 50V BLK
C317	4822 124 21894	10µF 16V
C318	4822 122 32831	680pF 50V
C319	5322 122 31626	100pF 50V
C320	4822 122 40568	68pF 50V
C321	4822 124 21894	10µF 16V
C322	4822 122 40586	0.01µF
C325	4822 124 21736	1µF 50V
C326	4822 124 21894	10µF 16V
C327	4822 122 40568	68pF J CH 50V
C330	4822 122 40586	0.01µF
C331	4822 122 40586	0.01µF
C332	4822 122 40586	0.01µF
C333	5322 122 31626	100pF J CH 50V BLK
C334	4822 122 40464	220pF 50V
C335	4822 124 21894	10µF 16V
C336	4822 124 41139	100µF 16V
C337	4822 124 21852	470µF 16V
C338	5322 122 31626	100pF J CH 50V BLK
C339	4822 124 21844	4.7µF 50V
C340	4822 124 21894	10µF 16V
C341	4822 124 21844	4.7µF 50V
C342	4822 124 21844	4.7µF 50V
C343	4822 121 42698	0.1µF 50V
C344	4822 122 40586	0.01µF
C351	4822 122 40589	0.047µF 50V
C352	4822 122 33817	6.8pF
J301	4822 265 30668	4 PIN
J302	4822 265 30669	5 PIN
J355	4822 265 40957	12 PIN

PM01 IVA2 CHROMINANCE

Q803	4822 130 42431	2SC1740S(R OR S)
Q804	4822 130 42431	2SC1740S(R OR S)
Q805	4822 130 42433	2SA933SLN(R OR S)
Q806	4822 130 42431	2SC1740S(R OR S)
IC81	4822 209 61726	LA7331
D801	4822 130 32362	MA165
D802	4822 130 32362	MA165
D803	4822 130 32362	MA165
D804	4822 130 32362	MA165
D805	4822 130 32362	MA165
D806	4822 130 32362	MA165
D807	4822 130 32362	MA165
D808	4822 130 32362	MA165
D809	4822 130 32362	MA165
D810	4822 130 32362	MA165

CRYSTAL

X801	4822 242 72951	4.43MHz
L801	4822 157 60445	15µH
L802	4822 152 20652	2.2mH
L803	4822 157 60452	330µH
L804	4822 157 60451	220µH
L805	4822 152 20663	22µH
L807	4822 152 20663	22µH
L808	4822 157 60458	3.3µH

FILTERS

FL81	4822 320 40219	PAL 2H COMB TER
FL82	4822 242 72949	1.4M-LPF 4.43M-BPF 5
R801	4822 116 52219	330Ω J 1/6W
R802	4822 116 52243	1.5kΩ J 1/6W
R803	4822 116 52257	22kΩ J 1/6W
R804	4822 116 52243	1.5kΩ J 1/6W
R805	4822 116 52204	1kΩ J 1/6W
R806	4822 116 52204	1kΩ J 1/6W
R807	4822 116 52204	1kΩ J 1/6W
R808	4822 116 52204	1kΩ J 1/6W
R809	4822 116 52224	470Ω J 1/6W
R810	4822 116 52257	22kΩ J 1/6W
R811	4822 116 52284	47kΩ J 1/6W
R812	4822 116 52257	22kΩ J 1/6W
R813	4822 116 52257	22kΩ J 1/6W
R814	4822 116 52233	10kΩ J 1/6W
R815	4822 116 52233	10kΩ J 1/6W
R816	4822 116 52233	10kΩ J 1/6W
R817	4822 116 52233	10kΩ J 1/6W
R818	4822 116 52243	1.5kΩ J 1/6W
R819	4822 116 52258	220kΩ J 1/6W
R820	4822 116 52204	1kΩ J 1/6W
R821	4822 116 52284	47kΩ J 1/6W
R822	4822 116 52204	1kΩ J 1/6W
R829	4822 116 52215	220Ω J 1/6W
R830	4822 116 52204	1kΩ J 1/6W
R831	4822 116 52195	47Ω J 1/6W
R832	4822 116 52256	2.2kΩ J 1/6W
R833	4822 116 52215	220Ω J 1/6W
R834	4822 116 52204	1kΩ J 1/6W
R835	4822 116 52257	22kΩ J 1/6W
R836	4822 116 52257	22kΩ J 1/6W
R846	4822 116 52211	150Ω J 1/6W
R854	4822 116 52204	1kΩ J 1/6W
C803	4822 122 40586	0.01µF
C805	4822 121 42698	0.1µF 50V
C806	4822 122 40586	0.01µF
C807	4822 124 21736	1µF 50V
C808	5322 122 32335	330pF 50V
C809	4822 124 21736	1µF 50V
C810	4822 124 21736	1µF 50V
C811	4822 122 40588	0.022µF Z 50V
C812	4822 122 40589	0.047 CERAMIC
C813	4822 122 40589	0.047 CERAMIC
C814	5322 122 31626	100pF 50V
C815	5322 122 32335	330pF K 50V
C816	4822 122 40586	0.01µF 16V
C817	4822 122 30034	470pF K 50V
C818	4822 122 40588	0.022µF Z 50V
C819	4822 124 21736	1µF 50V
C820	4822 122 40589	0.047 CERAMIC
C821	4822 122 33656	39pF J CH 50V
C822	4822 122 40568	68pF 50V
C823	4822 122 40586	0.01µF 16V
C824	4822 124 41246	47µF 16V
C825	4822 122 40586	0.01µF
C826	5322 122 31626	100pF J CH 50V BLK
C827	4822 122 40586	0.01µF 16V
C829	4822 122 40588	0.022µF 25V
C830	4822 122 40586	0.01µF
C831	4822 122 32831	680pF K 50V
C837	4822 124 21894	10µF 16V
C838	4822 122 40586	0.01µF
J801	4822 265 40956	7 PIN

PM02 IAD4 NORMAL AUDIO

Q401	4822 130 42431	2SC1740S(R OR S)
Q404	4822 130 42431	2SC1740S(R OR S)
IC41	4822 209 60074	BA7766AS
D401	4822 130 32362	MA165
D402	4822 130 32362	MA165
L401	4822 157 53914	OSC COIL
L404	4822 152 20663	22µH
L405	4822 152 20643	10mH
R401	4822 116 52224	470Ω J 1/6W
R402	4822 116 52284	47kΩ J 1/6W
R403	4822 116 52219	330Ω J 1/6W
R404	4822 116 52272	330kΩ J 1/6W
R405	4822 116 52296	6.8kΩ J 1/6W
R406	4822 116 52233	10kΩ J 1/6W
R407	4822 116 52284	47kΩ J 1/6W
R410	4822 116 52283	4.7kΩ J 1/6W
R411	4822 116 52297	68kΩ J 1/6W
R412	4822 116 52235	1MΩ J 1/6W
R413	4822 116 52204	1kΩ J 1/6W
R414	4822 116 52283	4.7kΩ J 1/6W
R415	4822 116 52271	33kΩ J 1/6W
R416	4822 116 52234	100kΩ J 1/6W
R417	4822 116 52234	100kΩ J 1/6W
R418	4822 116 52284	47kΩ J 1/6W
R419	4822 116 52296	6.8kΩ J 1/6W
R420	4822 116 52243	1.5kΩ J 1/6W
R421	4822 116 52234	100kΩ J 1/6W
R424	4822 116 52224	470Ω J 1/6W
R425	4822 116 52296	6.8kΩ J 1/6W
R427	4822 111 91285	100Ω J 1/6W
R428	4822 116 52271	33kΩ J 1/6W
R430	4822 116 52176	10Ω J 1/6W
R431	4822 100 11471	100kΩ
R432	4822 116 52244	15kΩ J 1/6W
R438	4822 116 52256	2.2kΩ J 1/6W
R439	4822 116 52233	10kΩ J 1/6W
R440	4822 116 52269	3.3kΩ J 1/6W
R442	4822 116 52284	47kΩ J 1/6W
R443	4822 116 52284	47kΩ J 1/6W
R444	4822 116 52233	10kΩ J 1/6W
R445	4822 116 52233	10kΩ J 1/6W
C401	4822 122 33795	4700pF
C402	4822 122 32831	680pF
C403	4822 124 21894	10µF 16V
C404	4822 122 33639	1000pF
C405	4822 124 21894	10µF 16V
C406	4822 121 41857	0.01µF ,J,M, 50V
C407	4822 124 21894	10µF 16V
C408	4822 121 42775	0.0056µF
C409	5322 122 32335	330pF K 50V
C410	4822 124 21894	10µF 16V
C411	4822 121 42698	0.1µF ,J,N, 50V
C412	5322 122 31626	100pF J CH 50V BLK
C413	5322 122 31626	100pF J CH 50V BLK
C414	4822 122 40464	220pF K 50V
C415	4822 124 21894	10µF 16V
C417	4822 121 41856	0.022µF
C419	4822 124 21894	10µF 16V
C420	4822 124 21736	1µF 50V ELECTR.
C421	4822 124 41139	100µF 16V
C422	4822 124 21736	1µF 50V
C427	4822 122 40586	10000pF
C428	4822 122 33639	1000pF
C429	4822 121 43027	0.015µF 100V
C430	4822 124 21894	10µF 16V
C431	4822 122 40586	10000pF
C432	4822 122 40586	10000pF
C433	4822 122 30114	2200pF K 50V
C434	4822 124 21894	10µF 16V
J420	4822 265 51256	23 PIN
J424	4822 267 40823	6 PIN

PM02 IDE3 DRIVER

Q6A1	4822 130 42254	2SD1275
Q6A2	4822 130 42431	2SC1740S(R OR S)
Q6A3	4822 130 42254	2SD1275
Q6A4	4822 130 61439	2SB1237(R)
IC27	4822 209 60048	AN3814k
IC28	4822 209 60046	BA6432S CAP.MOTOR
D6A1	4822 130 32362	MA165
D6A2	4822 130 32362	MA165
D6A3	4822 130 32362	MA165

ZENER

Z6A1	4822 130 80273	8.2V ZENER
Z6A2	4822 130 33948	5.6V ZENER
Z6A3	4822 130 80273	8.2V ZENER
Z6A4	4822 130 80132	3.9V ZENER
Z6A5	4822 130 80132	3.9V ZENER
Z6A6	4822 130 80273	8.2V ZENER
R2B4	4822 116 52176	10Ω J 1/6W
R2B5	4822 116 52176	10Ω J 1/6W
R2B6	4822 116 52176	10Ω J 1/6W
R2B7	4822 116 52908	1.0Ω J 1/2W
R2C1	4822 116 52243	1.5kΩ J 1/6W
R268	4822 116 52283	4.7kΩ J 1/6W
R269	4822 116 52204	1kΩ J 1/6W
R275	4822 116 52195	47Ω J 1/6W
R276	4822 116 52195	47Ω J 1/6W
R277	4822 116 52908	1.0Ω J 1/2W
R278	4822 116 52195	47Ω J 1/6W
R279	4822 116 52195	47Ω J 1/6W
R6A0	4822 116 60306	1Ω J 1/2W
R6A1	4822 116 52257	22kΩ J 1/6W
R6A2	4822 116 52283	4700Ω J 1/6W
R6A3	4822 116 52296	6800Ω J 1/6W
R6A4	4822 116 52204	1kΩ J 1/6W
R6A5	4822 116 60306	1Ω FUSE RESISTOR
R6A6	4822 116 52296	6.8kΩ J 1/6W
R6A7	4822 116 52204	1kΩ J 1/6W

C260	4822 121 42698	0.1µF ,J,N, 50V
C261	4822 124 41153	220µF 16V
C262	4822 124 21844	4.7µF 50V
C263	4822 124 41246	47µF 16V
C264	4822 124 21844	4.7µF 50V
C265	4822 124 21844	4.7µF 50V
C266	4822 122 40589	0.047 CERAMIC
C267	4822 122 33794	3300pF 16V
C268	4822 122 40589	0.047 CERAMIC
C269	4822 122 33794	3300pF K 50V
C270	4822 122 40589	0.047 CERAMIC
C271	4822 122 33794	3300pF 16V
C272	4822 124 21844	4.7µF 50V
C273	4822 124 21844	4.7µF 50V
C274	4822 124 21844	4.7µF 50V
C276	4822 124 21894	10µF 16V
C277	4822 122 40589	0.047 CERAMIC
C278	4822 121 42698	0.1µF ,J,N, 50V
C279	4822 121 42698	0.1µF ,J,N, 50V
C280	4822 121 42698	0.1µF ,J,N, 50V
C281	4822 121 42698	0.1µF ,J,N, 50V
C282	4822 121 42698	0.1µF ,J,N, 50V
C283	5322 121 42491	0.047µF ,J,N, 50V
C284	4822 124 41139	100µF 16V
C285	4822 122 40588	0.022µF
C6A0	4822 124 21852	470µF 16V
C6A1	4822 122 40586	10000pF
C6A2	4822 124 21736	1µF 50V ELECTR.
C6A3	4822 124 41153	220µF 16V ELECTR.
C6A4	4822 124 41246	47µF 16V

J217	4822 265 30777	3 PIN
J220	4822 265 30669	5 PIN
J601	4822 265 30668	4 PIN
J602	4822 265 30671	6 PIN
J603	4822 265 30669	5 PIN
J604	4822 265 30669	5 PIN
J606	4822 265 61199	31 PIN
J607	4822 265 30669	5 PIN
J608	4822 265 30671	6 PIN

PM02 IFE4 UHF / VHF TUNER / TV DEMODULATOR

Q701	4822 130 61474	2SD592R
Q702	4822 130 42431	2SC1740S(R OR S)
D701	4822 130 32362	MA165
ZENERS		
Z701	4822 130 33948	5.6V ZENER
Z702	4822 130 80132	3.9V ZENER
L701	4822 152 20663	22µH
L702	4822 152 20663	22µH
L703	4822 152 20663	22µH
L704	4822 152 20663	22µH
R701	4822 116 52283	4.7kΩ J 1/6W
R702	4822 116 52283	4.7kΩ J 1/6W
R703	4822 116 52283	4.7kΩ J 1/6W
R704	4822 116 52257	22kΩ J 1/6W
R705	4822 116 52284	47kΩ J 1/6W
R712	4822 116 52228	680Ω J 1/6W
R715	4822 116 52175	100Ω J 1/6W
R716	4822 116 52175	100Ω J 1/6W
R717	4822 116 52175	100Ω J 1/6W
R720	4822 116 52256	2.2kΩ J 1/6W
R721	4822 116 52271	33kΩ J 1/6W
R722	4822 116 52284	47kΩ J 1/6W
R723	4822 116 52257	22 kΩ J 1/6W
C701	4822 122 40586	10000pF
C702	4822 124 21894	10µF 16V
C703	4822 122 40589	0.047µF Z 50V
C704	4822 122 40586	10000pF
C705	4822 124 21894	10µF 16V
C706	4822 124 21407	0.47µF 50V
C718	4822 124 41246	47µF 16V
C719	4822 124 41246	47µF 16V
C720	5322 122 31626	100pF 50V
C721	5322 122 31626	100pF 50V
C722	5322 122 31626	100pF 50V
C723	4822 122 33639	1000pF
C724	4822 124 21894	10µF 16V
TUNER / IF PACK		
E701	4822 210 10379	TBKS3-001A ALPS

PM02 IPI1 PIP ANALOG

Q807	4822 130 42431	2SC1740
Q808	4822 130 42431	2SC1740
Q809	4822 130 42431	2SC1740
Q810	4822 130 42433	2SA933
IC81	4822 209 61696	M51285BFP
IC82	4822 209 61697	M52684AP
IC83	4822 209 61698	M51271SP

CRYSTALS

X801	4822 242 72946	17.73447MHz
X802	4822 242 72946	17.73447MHz
X805	4822 242 72945	500kHz CERALOCK
X806	4822 242 72945	500kHz CERALOCK
L802	4822 152 20641	100µH
L803	4822 157 60453	39µH
L804	4822 157 60453	39µH
L806	4822 157 60453	39µH
L807	4822 157 60453	39µH
L810	4822 152 20641	100µH
L813	4822 152 20641	100µH
R801	4822 116 52245	150kΩ 1/6W
R802	4822 116 52219	330Ω J 1/6W
R803	4822 116 52233	10kΩ J 1/6W
R804	4822 116 52243	1.5kΩ J 1/6W
R806	4822 116 52234	100kΩ J 1/6W
R807	4822 116 52215	220Ω J 1/6W
R808	4822 111 41355	75Ω J 1/6W
R809	4822 116 52243	1.5kΩ J 1/6W
R810	4822 116 52233	10kΩ J 1/6W
R811	4822 116 52283	4.7kΩ J 1/6W
R812	4822 116 52235	1MΩ J 1/6W
R813	4822 116 52257	22kΩ J 1/6W
R814	4822 116 52257	22kΩ J 1/6W
R815	4822 116 52204	1kΩ J 1/6W
R816	4822 116 52204	1kΩ J 1/6W
R817	4822 116 52204	1kΩ J 1/6W
R818	4822 116 52204	1kΩ J 1/6W
R819	4822 116 52204	1kΩ J 1/6W
R820	4822 116 52297	68kΩ J 1/6W
R821	4822 116 52224	470Ω J 1/6W
R822	4822 116 52233	10kΩ J 1/6W
R823	4822 116 52219	330Ω J 1/6W
R824	4822 116 52243	1.5kΩ J 1/6W
R825	4822 116 52244	15kΩ J 1/6W
R826	4822 116 52235	1MΩ J 1/6W
R827	4822 116 52271	33kΩ J 1/6W
R828	4822 116 52244	15kΩ J 1/6W
R829	4822 116 52244	15kΩ J 1/6W
R830	4822 116 52271	33kΩ J 1/6W
R831	4822 116 52285	470kΩ J 1/6W
R832	4822 116 52243	1.5kΩ J 1/6W
R833	4822 116 52175	100Ω J 1/6W
R834	4822 116 52215	220Ω J 1/6W
R835	4822 116 52257	22kΩ J 1/6W
R836	4822 116 52257	22kΩ J 1/6W
R837	4822 116 52297	68kΩ J 1/6W
R838	4822 116 52256	2.2kΩ J 1/6W
R839	4822 116 52204	1kΩ J 1/6W
R840	4822 116 52204	1kΩ J 1/6W
R868	4822 116 52284	47kΩ J 1/6W
R869	4822 116 52283	4.7kΩ J 1/6W
R870	4822 116 52233	10kΩ J 1/6W
R871	4822 116 52256	2.2kΩ J 1/6W
R872	4822 116 52234	100kΩ J 1/6W
R873	4822 116 52234	100kΩ J 1/6W
R874	4822 116 52233	10kΩ J 1/6W
R893	4822 116 52283	4.7kΩ J 1/6W
R894	4822 116 52204	1kΩ J 1/6W
R895	4822 116 52228	680Ω J 1/6W
C801	4822 124 41246	47µF 16V
C802	4822 124 21736	1µF 50V ELECTR.
C803	4822 124 41246	47µF 16V
C804	4822 122 40464	220pF K 50V
C805	4822 122 30034	470pF K 50V
C806	4822 122 33639	1000pF
C808	4822 121 42698	0.1µF ,J,N, 50V
C809	4822 124 21736	1µF 50V ELECTR.
C810	4822 122 31205	47pF 50V
C811	4822 122 40464	220pF 50V
C812	4822 122 33817	6.8pF 50V
C813	4822 122 40586	10000pF
C814	4822 122 40586	10000pF
C815	4822 124 21844	4.7µF 50V
C816	4822 124 21407	0.47µF 50V
C817	4822 122 33639	1000pF
C818	4822 122 40586	10000pF
C819	4822 122 40586	10000pF
C820	4822 122 40586	10000pF
C821	4822 122 40586	10000pF
C822	4822 122 40464	220pF K 50V
C823	4822 124 21736	1µF 50V ELECTR.
C824	4822 122 33639	1000pF
C825	4822 121 42698	0.1µF ,J,N, 50V
C826	4822 122 32917	33pF
C827	4822 122 32917	33pF
C828	4822 124 40464	4.7µF 35V BP
C829	4822 122 40586	10000pF
C830	4822 122 33639	1000pF
C831	4822 122 33639	1000pF
C832	4822 121 42698	0.1µF ,J,N, 50V
C833	4822 124 21736	1µF 50V ELECTR.
C834	4822 124 41246	47µF 16V
C835	4822 122 40586	10000pF
C836	4822 122 32917	33pF J CH 50V BLK
C837	4822 122 30034	470pF K 50V
C838	4822 122 33639	1000pF
C840	4822 122 32831	680pF K 50V
C841	4822 122 33639	1000pF
C842	5322 122 32335	330pF
C843	4822 122 32917	33pF
C844	4822 122 32917	33pF
C845	4822 122 40586	10000pF
C846	4822 122 40586	10000pF
C847	4822 124 21736	1µF 50V ELECTR.
C848	4822 124 41246	47µF 16V
C849	4822 122 40586	10000pF
C850	4822 122 40586	10000pF
C851	4822 122 33639	1000pF
C852	4822 122 40586	10000pF
C853	4822 122 33792	10pF
C854	4822 122 33639	1000pF
C856	4822 122 33639	1000pF
C857	4822 122 40589	0.047 CERAMIC
C858	4822 122 40589	0.047 CERAMIC

C859	4822 124 21736	1µF 50V ELECTR.
C860	4822 124 21407	0.47µF 50V
C861	4822 124 21736	1µF 50V ELECTR.
C862	4822 122 40586	10000pF
C863	4822 124 22047	1000µF 6.3V
C864	4822 124 21736	1µF 50V ELECTR.
C865	4822 125 50437	3-10P
C866	4822 125 50437	3-10P
C878	4822 124 41246	47µF 16V
C887	4822 124 21844	4.7µF 50V
C888	5322 121 42491	0.047µF
C889	4822 122 30114	2200pF
C890	4822 122 30099	3300pF

J801	4822 267 50877	12 PIN
J802	4822 267 50877	12 PIN

PM04 IVA3 CHROMINANCE SUB

Q801	4822 130 42431	2SC1740S(R OR S)
Q802	4822 130 61486	2SC2058S(P OR Q)
Q807	4822 130 42431	2SC1740S(R OR S)
Q808	4822 130 42431	2SC1740S(R OR S)
Q809	4822 130 42433	2SA933SLN(R OR S)
Q810	4822 130 42431	2SC1740S(R OR S)
Q811	4822 130 42431	2SC1740S(R OR S)

ZENER

Z801	4822 130 80273	8.2V ZENER

L809	4822 157 60445	15µH
L810	4822 157 60445	15µH

FILTER

FL83	4822 320 40218	PAL-1H DELAY LINE VN

R823	4822 116 52283	4.7kΩ J 1/6W
R824	4822 116 52204	1kΩ J 1/6W
R825	4822 116 52243	1.5kΩ J 1/6W
R826	4822 116 52219	330Ω J 1/6W
R827	4822 116 52211	150Ω J 1/6W
R828	4822 116 52204	1kΩ J 1/6W
R837	4822 116 52233	10kΩ J 1/6W
R838	4822 116 52296	6.8kΩ J 1/6W
R839	4822 116 52224	470Ω J 1/6W
R840	4822 116 52228	680Ω J 1/6W
R841	4822 116 52228	680Ω J 1/6W
R842	4822 116 52257	22kΩ J 1/6W
R843	4822 116 52257	22kΩ J 1/6W
R844	4822 116 52215	220Ω J 1/6W
R845	4822 116 52243	1.5kΩ J 1/6W
R847	4822 116 52257	22kΩ J 1/6W
R848	4822 116 52257	22kΩ J 1/6W
R849	4822 116 52257	22kΩ J 1/6W
R850	4822 116 52257	22kΩ J 1/6W
R851	4822 116 52257	22kΩ J 1/6W
R852	4822 116 52284	47kΩ J 1/6W
R855	4822 111 91285	100Ω 1/6W

C801	4822 122 40586	0.01µF
C802	4822 122 40586	0.01µF
C804	4822 122 40586	0.01µF
C832	4822 122 40586	0.01µF
C833	4822 122 40586	0.01µF
C834	4822 122 40586	0.01µF
C835	4822 124 21894	10µF 16V

J802	4822 265 40955	7 PIN

PP01 IPI2 PIP DIGITAL

Q801	4822 130 42433	2SA933S(R OR S)
Q802	4822 130 42433	2SA933S(R OR S)
Q803	4822 130 42433	2SA933S(R OR S)
Q804	4822 130 42433	2SA933S(R OR S)
Q805	4822 130 42433	2SA933S(R OR S)
Q806	4822 130 42433	2SA933S(R OR S)
IC84	4822 209 61699	M50541FP
IC85	4822 209 61701	M52686AFP
IC86	4822 209 61702	M5M4C500L
IC87	4822 209 61703	M52682FP
IC88	4822 209 61688	N0R 74HC02
D801	4822 130 81166	1SS184
D802	4822 130 81166	1SS184

CRYSTAL

X803	4822 242 72944	30MHz CERALOCK
L814	4822 157 61916	47µH

FILTERS

FLA1	4822 126 10441	10000pF 100VDC
FLA2	4822 126 10441	10000pF 100VDC
FLA3	4822 126 10441	10000pF 100VDC
FLA4	4822 126 10441	10000pF 100VDC
FL71	4822 126 10442	DSS306 270pF 100VDC
FL72	4822 126 10442	DSS306 270pF 100VDC
FL73	4822 242 72941	SDL-1727 400nS DELAY
FL74	4822 242 72942	SLP-2513 0.65MHz L,P
FL75	4822 242 72942	SLP-2513 0.65MHz L,P
FL76	4822 242 72943	SLP-2224A 1.2MHz L,P
FL81	4822 126 10442	DSS306 270pF 100VDC
FL82	4822 126 10442	DSS306 270pF 100VDC
FL83	4822 126 10442	DSS306 270pF 100VDC
FL84	4822 126 10442	DSS306 270pF 100VDC
FL85	4822 126 10443	DSS306 47pF 100VDC
FL86	4822 126 10441	DSS306 0.01µF 100VDC
FL87	4822 126 10441	DSS306 0.01µF 100VDC
FL88	4822 126 10441	DSS306 0.01µF 100VDC
FL89	4822 126 10441	DSS306 0.01µF 100VDC
FL91	4822 126 10441	DSS306 0.01µF 100VDC
FL93	4822 126 10443	DSS306 47pF 100VDC
FL94	4822 126 10443	DSS306 47pF 100VDC
FL95	4822 126 10443	DSS306 47pF 100VDC
FL96	4822 126 10443	DSS306 47pF 100VDC
FL97	4822 126 10443	DSS306 47pF 100VDC
FL98	4822 126 10443	DSS306 47pF 100VDC
FL99	4822 126 10442	DSS306 270pF 100VDC

R845	4822 111 90894	1kΩ J 1/10W
R846	4822 111 90894	1kΩ J 1/10W
R847	4822 111 91076	3.3kΩ J 1/10W
R848	4822 111 90894	1kΩ J 1/10W
R849	4822 111 90894	1kΩ 1/10W
R850	4822 111 91076	3.3kΩ J 1/10W
R851	4822 111 90894	1kΩ J 1/10W
R852	4822 111 90894	1kΩ J 1/10W
R853	4822 111 91076	3.3kΩ J 1/10W
R854	4822 111 90897	1MΩ J 1/10W
R856	4822 111 90924	680Ω J 1/10W
R857	4822 111 91076	3.3kΩ J 1/10W
R858	4822 111 90894	1kΩ J 1/10W
R859	4822 111 90894	1kΩ J 1/10W
R860	4822 111 91076	3.3kΩ J 1/10W
R861	4822 111 91076	3.3kΩ J 1/10W
R862	4822 111 91076	3.3kΩ J 1/10W
R863	4822 111 91076	3.3kΩ J 1/10W
R864	4822 111 90918	4.7kΩ J 1/10W
R865	4822 111 90918	4.7kΩ J 1/10W
R866	4822 111 90894	1kΩ J 1/10W
R867	4822 111 90896	100kΩ J 1/10W
R890	4822 111 90918	4.7kΩ J 1/10W
R891	4822 111 90895	10kΩ J 1/10W
R892	4822 111 90892	0Ω
R896	4822 111 90894	1kΩ J 1/10W

C867	4822 122 33689	0.01µF
C868	4822 122 33689	0.01µF
C869	4822 122 33689	0.01µF
C870	4822 124 21736	1µF 50V ELECTR.
C871	4822 124 21736	1µF 50V ELECTR.
C872	4822 124 21736	1µF 50V ELECTR.
C873	4822 122 32669	0.047µF
C874	4822 126 10006	7pF
C875	4822 126 10006	7pF
C876	4822 122 32693	33pF
C877	4822 122 33132	22pF
C879	4822 122 32669	0.047µF
C880	4822 124 21736	1µF 50V ELECTR.
C881	4822 122 33689	0.01µF
C882	4822 124 21736	1µF 50V ELECTR.
C883	4822 122 33689	0.01µF
C884	4822 122 32669	0.047µF
C885	4822 122 32669	0.047µF
C886	4822 122 32669	0.047µF
C891	4822 124 41139	100µF 16V
C893	4822 124 41139	100µF 16V
C894	4822 124 41246	47µF 16V
C895	4822 122 32669	0.047µF
C896	4822 122 32669	0.047µF
C897	4822 122 33689	0.01µF
C898	4822 125 50437	3P-10P TRIMMING

J804	4822 267 50878	12 PIN SOCKET SIDE TYPE
J805	4822 267 50878	12 PIN SOCKET SIDE TYPE

PS01 IPS POWER SUPPLY

Q101	4822 130 61902	2SC3979
Q102	4822 130 42571	2SD1458
Q103	4822 130 42431	2SC1740S(R OR S)
Q104	4822 130 42433	2SA933S(R OR S)
IC01	5322 130 90735	PHOTO COUPLER PC113
D101	4822 130 81732	1J4B42 BRIDGE DIODE
D102	4822 130 81244	ERA22-10
D103	4822 130 32362	MA165
D104	4822 130 32362	MA165
D105	4822 130 81728	1GWJ42
D106	4822 130 80528	MA185
D107	4822 130 81249	RU4YX
D108	4822 130 80528	MA185
D109	4822 130 32362	MA165
D110	4822 130 32362	MA165
D111	4822 130 32362	MA165
D112	4822 130 10037	AVR-G05D471k
D113	4822 130 32362	MA165
D114	4822 130 32362	MA165

ZENERS

Z101	4822 130 80598	22V ZENER
Z102	4822 130 81729	MTZJ33D
Z103	4822 130 33948	5.6V ZENER
T101	4822 146 21474	SW TRANSFORMER
L101	4822 157 53917	18mH
L102	4822 152 20663	22µH
L103	4822 157 60448	10µH
L104	4822 152 20648	22µH
R101	4822 116 52234	100kΩ J 1/6W
R102	4822 116 52272	330kΩ J 1/6W
R103	4822 116 82107	68kΩ J 3W
R104	4822 116 82105	82Ω J 1W
R105	4822 116 82104	0.68Ω FUSE RESISTOR
R106	4822 116 52269	3.3kΩ J 1/6W
R107	4822 116 52283	4.7kΩ J 1/6W
R108	4822 116 52219	330Ω J 1/6W
R109	4822 111 90967	4.7Ω J 1/4W
R110	4822 115 90166	10Ω G 1/4W
R111	4822 115 90166	10Ω G 1/4W
R112	4822 116 81748	330Ω G 1/4W
R113	4822 116 52233	10kΩ J 1/6W
R114	4822 116 52215	220Ω J 1/6W
R115	4822 116 52296	6.8kΩ J 1/6W
R116	4822 116 52219	330Ω J 1/6W
R117	4822 116 52257	22kΩ J 1/6W
R118	4822 116 52269	3.3kΩ J 1/6W
R119	4822 116 52215	220Ω J 1/6W
R120	4822 116 52233	10kΩ J 1/6W
R121	4822 116 82051	150Ω G 1/4W
C101	4822 122 33822	DE7090 B 221k VA1-KC
C102	4822 122 33822	DE7090 B 221k VA1-KC
C103	4822 121 43363	ECQ-U 0.22µF AC250V
C104	4822 122 33822	DE7090 B 221k VA1-KC
C105	4822 122 33822	DE7090 B 221k VA1-KC
C106	4822 121 51422	ECQ-UN 0.1µF AC250V
C107	4822 122 31956	SPARK KILLER 0.001 µF
C108	4822 122 31956	SPARK KILLER 0.001 µF
C109	4822 122 31956	SPARK KILLER 0.001 µF
C110	4822 122 31956	SPARK KILLER 0.001 µF
C111	4822 122 30099	3300pF K 50V
C112	4822 122 30128	4700pF K 50V
C113	4822 121 43362	ECQ-P 0.0033µF 100V
C114	4822 122 30128	4700pF K 50V
C115	4822 121 51421	ECQ E6473MZ(MZB)
C116	4822 122 33821	150pF K 2kVDC ECK
C117	4822 122 40586	10000pF
C118	4822 122 40586	10000pF
C119	4822 124 23111	1000µF 16V 105C
C120	4822 124 23111	1000µF 16V 105C
C121	4822 124 22777	10µF M 50V
C122	4822 124 23114	82µF 400V 85C
C123	4822 124 22781	1000µF 25V 105C
C124	4822 124 22781	1000µF 25V 105C
C125	4822 122 30027	1000pF K 50V
C126	4822 124 22777	10µF M 50V
C127	4822 124 22776	1µF 50V
C128	4822 121 42698	0.1µF ,J,N, 50V

FUSES

F101	4822 253 30191	1.6 A 250V BS LISTED
PR01	4822 209 61685	CURRENT PROTECTOR
J101	4822 265 20359	2 PIN
J102	4822 256 30329	FUSE CLIP
J103	4822 256 30329	FUSE CLIP
J104	4822 265 40958	10 PIN

MECHANICAL PARTS
CABINET

002B	4822 443 40839	FRONT (K)
007B	4822 413 31588	TRACKING KNOB
001D	4822 443 62885	TOP COVER
001F	4822 464 50782	FRAME K
002F	4822 464 50791	FRAME
003F	4822 443 51181	BOTTOM
004F	4822 462 41498	FOOT
005F	4822 403 53985	EARTH BRACKET L
006F	4822 403 53986	EARTH BRACKET R
007F	4822 403 53994	EARTH BRACKET FRONT
008F	4822 462 41343	RUBER FOOT
009F	4822 502 12128	SCREW :BOTTOM
010F	4822 443 62951	REAR HOLDER
011F	4822 443 62887	DISP COVER
012F	4822 255 41081	DISP HOLDER
013F	4822 502 13208	SCREW :HA
014F	4822 502 12128	SCREW :RCA
015F	4822 502 12128	SCREW :REAR HOLDER
016F	4822 502 12128	SCREW :SOPS
017F	4822 502 12128	SCREW :TOP COVER
018F	4822 443 62889	CASS LID (K)
021F	4822 492 70395	CASS LID SPRING
023F	4822 502 12133	SCREW :MECHA REAR
024F	4822 502 13207	SCREW :MECHA FRONT
025F	4822 502 13208	SCREW :FM FE PCB
026F	4822 502 13208	SCREW :MECHA
028F	4822 502 13208	SCREW :FRONT PANEL
029F	4822 502 13208	SCREW :DC
030F	4822 502 13208	SCREW :VS
032F	4822 466 92434	INSULATOR FOR SOPS
034F	4822 443 62883	SOPS A
035F	4822 443 62884	SOPS B
041F	4822 401 11216	AC CORD CLAMPER
043F	4822 403 53715	BRACKET FOR HEATSINK
044F	4822 502 12101	SCREW FOR HEAT SINK
047F	4822 502 12101	SCREW :PS HEAT SINK
050F	4822 403 53984	TERMINAL
051F	4822 492 70396	LEAF SPRING
056F	4822 401 11323	CODE CLAMPER
057F	4822 502 13208	SCREW :IR PCB
065F	4822 462 71643	COVER
066F	4822 462 41501	BUFFER :TUNER
001L	4822 511 61011	HEAT SINK :DE PCB
002L	4822 511 61012	HEAT SINK :SOPS
004L	4822 511 61011	HEAT SINK :SOPS
001M	4822 443 30773	MECHA K
W101	4822 321 10661	AC CORD

TAPE DECK CHASSIS 1 (BOTTOM VIEW)

002N	4822 403 53564	HA MOUNT ANGLE(L)
003N	4822 403 53565	HA MOUNT ANGLE(R)
005N	4822 290 81211	EARTH PLATE UNIT
006N	4822 691 20567	CYLINDER UNIT
007N	4822 691 20568	UPPER CYLINDER UNIT
011N	4822 403 53614	TENSION ARM (1) UNIT
012N	4822 492 32912	TENSION SPRING
013N	4822 401 11322	TENSION BAND UNIT
014N	4822 528 10772	SUPPLY REEL TABLE UNIT
015NA	4822 532 52058	REEL WASHER 0.3MM
015NB	4822 532 52057	REEL WASHER 0.2MM
015NC	4822 532 52055	REEL WASHER 0.5MM
016N	4822 403 53615	RELEASE ARM (A) UNIT
017N	4822 249 20076	FE HEAD
018N	4822 403 53605	TENS ARM BASE (1) UNIT
019N	4822 403 53562	MOUNT ANGLE (L)
020N	4822 532 52054	CUT WASHER
021N	4822 403 53616	RELEASE ARM (B) UNIT
022N	4822 492 32916	TENSION RELEASE SPRING
023N	4822 271 30685	SAFETY SW
024N	4822 403 53938	SUPPLY MAIN BRAKE UNIT
025N	4822 403 53988	SOFT BRAKE (1) UNIT
026N	4822 492 42296	SOFT BRAKE SPRING
027N	4822 403 53989	MAIN BRAKE UNIT
028N	4822 403 53619	SOFT BRAKE UNIT
029N	4822 492 42295	SOFT BRAKE SPRING
030N	4822 403 53563	MOUNT ANGLE (R)
031N	4822 502 13168	ADJUST SCREW
032N	4822 492 52043	ADJUST SPRING
033N	4822 502 11831	AZIMUTH ADJUST SCREW
034N	4822 249 10395	A/C HEAD
035N	4822 505 10945	M4 NYLON NUT
036N	4822 505 11022	ADJUST NUT
037N	4822 403 53987	HEAD BASE UNIT
038N	4822 492 42297	A/C HEAD SPRING
039N	4822 403 53974	LOADING ARM (1) UNIT
040N	4822 492 32907	SUB POST SPRING
041N	4822 502 13171	THRUST SCREW UNIT
042N	4822 502 13167	HOUSING SCREW
043N	4822 532 52053	OIL SEAL
044N	4822 403 53596	PINCH CAM
045N	4822 528 81371	PRESSURE ROLLER UNIT
046N	4822 492 33143	PIN PRESSURE SPRING
047N	4822 403 53975	PINCH PRESSURE ARM
048N	4822 492 32915	PINCH PRESS ARM SPRING
049N	4822 403 53583	PINCH LIFT ARM
050N	4822 522 32859	P5 PULL OUT SECT GEAR
051N	4822 522 32525	PINCH CAM
052N	4822 505 10743	M3 NYLON NUT
053N	4822 403 53609	P5 UNIT
054N	4822 492 70088	P5 SPRING
055N	4822 276 12496	MODE SW
057N	4822 528 90699	ROLLER POST UNIT
058N	4822 256 91349	INCLIND BASE(S)(1) UNIT
059N	4822 502 11831	ROLLER POST SCREW
060N	4822 403 53571	POST STOPPER
061N	4822 528 90698	ROLLER POST UNIT
062N	4822 403 53973	INCLIND BASE(T)(1)UNIT
063N	4822 466 82389	INCLIND ADJ PLATE UNIT
064N	4822 522 32529	PINCH SPEED DOWN GEAR
065N	4822 522 32512	CONNECTION GEAR
066N	4822 526 20165	SOLENOID UNIT
067N	4822 403 53603	KICK ROD UNIT
068N	4822 403 53972	SOLENOID LEVER(1)UNIT
069N	4822 492 32908	KICK ROD SPRING
070N	4822 492 33144	MAIN BRAKE SPRING
071N	4822 528 10773	TAKE UP REEL UNIT
072N	4822 691 20483	HOUSING UNIT
076N	4822 502 13169	HOUSING SCREW
077N	4822 502 13243	CYLINDER SCREW
080N	4822 255 41082	LED HOLDER
081N	4822 403 53979	REINFORCEMENT PLATE
082N	4822 403 53981	REINFORCEMENT PLATE
083N	4822 492 70087	LEAF SPRING
084N	4822 530 70449	SUPPLY UPPER LIMITER
085N	4822 528 81369	SUPPLY ROLLER
086N	4822 535 80816	P1 COLLAR
087N	4822 532 52193	SUPPLY ROLLER LIMITER
088N	4822 532 52194	P4 UPPER LIMITER
089N	4822 532 21402	P4 SLEEVE
090N	4822 532 52195	P4 LOWER LIMITER
254N	4822 214 32912	MECHA CONNECTION CBA

TAPE DECK CHASSIS 2 (TOP VIEW)

100N	4822 532 52192	CUT WASHER
101N	4822 492 32917	TAKE UP ARM SPRING
102N	4822 492 70085	MAIN LEVER SPRING
103N	4822 403 53992	MAIN LEVER (1) UNIT
104N	4822 403 53991	SUB LEVER
105N	4822 403 53976	SS BRAKE ARM UNIT
106N	4822 492 42303	SS BRAKE SPRING
107N	4822 403 53982	SS BRAKE BASE(1)UNIT
108N	4822 403 53993	TENSION ROLLER UNIT
109N	4822 403 53618	CAM FOLLOWER ARM UNIT
110N	4822 403 53581	DETENT ARM
111N	4822 522 32861	MAIN CAM GEAR
112N	4822 522 32516	SUB CAM GEAR
113N	4822 522 32519	CENTRE GEAR
114N	4822 522 32526	RETAINER GEAR
115N	4822 522 32517	PLANET GEAR
116N	4822 528 30386	CLUTCH DISK
117N	4822 492 32911	CLUTCH SPRING
118N	4822 403 53561	LOCK SLIDE GEAR
119N	4822 522 32513	DRIVE DISK
120N	4822 522 32515	RING GEAR
121N	4822 532 52052	CUT WASHER
122N	4822 403 53578	CHANGE LEVER
123N	4822 403 53599	RELEASE LEVER(1)UNIT
124N	4822 492 32909	RELEASE SPRING
125N	4822 403 53579	RESEASE LEVER
127N	4822 522 32532	TAKE UP REEL GEAR UNIT
128N	4822 522 32527	SUPPLY REEL GEAR
129N	4822 403 53577	RETURN LEVER (R)
130N	4822 403 53576	RETURN LEVER (L)
131N	4822 403 53572	STOPPER BASE
132N	4822 358 30881	TIMING BELT
133N	4822 528 81368	ROTOR UNIT
134N	4822 403 53983	ROTOR STOPPER
135N	4822 691 20571	STATOR UNIT
136N	4822 466 92285	SUB PLATE
137N	4822 528 81246	CENTRE PULLEY UNIT
138N	4822 522 32862	LOADING GEAR (T)
139N	4822 492 32923	LOADING SPRING (T)
140N	4822 403 53612	LOADING ARM(T)(1)UNIT
141N	4822 403 53978	SECTOR GEAR UNIT
142N	4822 522 32528	LOADING CAM GEAR
143N	4822 522 32523	LOADING GEAR (S)
144N	4822 403 53575	PLAY CONTROL ARM
145N	4822 403 53611	LOADING ARM(S)(1)UNIT
146N	4822 522 32863	INTERMEDIATE GEAR
147N	4822 403 53977	PLAY ARM UNIT
148N	4822 249 20075	FG HEAD
149N	4822 492 32918	LOADING SPRING (S)
150N	4822 502 13244	STATOR SPACER SCREW
151N	4822 505 10957	STATOR UNIT

CASSETTE COMPARTMENT

201N	4822 443 30737	TOP PLATE
202N	4822 691 20569	CASSETTE HOLDER UNIT
216N	4822 443 40718	SIDE PLATE(L) UNIT
217N	4822 443 40716	SIDE PLATE (L)
218N	4822 403 53586	OPENER LEVER
219N	4822 691 20566	SIDE PLATE(R)UNIT
221N	4822 277 21383	SLIDE SW UNIT
229N	4822 535 92528	MAIN SHAFT UNIT
230N	4822 492 42298	SUB WIPER SPRING
231N	4822 403 53584	SUB WIPER ARM (L)
232N	4822 403 53585	SUB WIPER ARM (R)
233N	4822 492 42306	SUB WIPER SPRING (R)
234N	4822 403 53626	CASSETTE GUIDE
240N	4822 403 53627	CASSTE HOLDER ANGLE
251N	4822 214 32532	PHOTO TR(S) CBA
252N	4822 214 32552	PHOTO TR(T) CBA

SERVICE TOOLS

4822 397 30103	ALIGNMENT CASSETTE
4822 395 80184	POST ADJUSTMENT PLATE
4822 395 90587	TENSION POST ADJ. FIXTURE
4822 395 90584	BACK TENSION METER
4822 395 40055	RETAINING RING REMOVER
4822 395 50274	HOR. POSITION SCREWDRIVER
4822 395 50275	POST ADJ. SCREWDRIVER
4822 395 80304	UPPER CYLINDER REMOVER
4822 395 90585	CHECK LIGHT
4822 395 90586	HEIGHT ADJ. FIXTURE
4822 395 90253	TOOL KIT
4822 395 90256	HEAD CLEANING STICK
4822 395 90238	MICRO METER.
4822 395 84011	SPRING PRESSURE METER
4822 321 60545	EXTENSION CABLE

MISCELLANEOUS

001T	4822 736 51898	USERS MANUAL
001Z	4822 218 30536	REMOTE CONTROL
002Z	4822 321 23706	RF CABLE
003Z	4822 138 10106	BATTERY R6P1.5V